REPORT

ON THE

SETTLEMENT OF THE AGRA DISTRICT,

NORTH-WESTERN PROVINCES.

BY H. F. EVANS

Bengal Civil Service.

ALLAHABAD:

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No. $\frac{156}{I-III}$ OF 1880.

FROM

J. S. MACKINTOSH, ESQ.,

Secy. to Board of Revenue, North-Western Provinces,

To

C. ROBERTSON, ESQ.,

Secy. to Govt., North-Western Provinces and Oudh.

Dated Allahabad, the 30th August, 1880.

SIR,

Present:
H. S. REID, ESQ.

I AM desired by the Senior Member of the Board to submit for the orders of Government the final settlement report of the Agra district by Mr. H. F. Evans, Settlement Officer, with the following review.

2. In the 8th paragraph of his report Mr. Evans has described the changes which have taken place in the boundaries, area and internal sub-divisions of the Agra district, since the present revision of the settlement, which commenced with the operations of the cadastral survey in 1872. His report refers to the district as it stood in 1872, when its area was 1,897 square miles, distributed over nine tahsils. The district as now constituted contains 1,855 square miles, having lost 67,899 acres from pargana Farah which have been transferred to Muttra, and having gained 41,214 acres transferred from pargana Jalesar to pargana Itimádpur. The number of tahsils has been reduced from nine to seven. A separate report has been submitted for pargana Jalesar, which now forms part of the Etah district, to which it had been transferred in 1879 from Agra, to which it had been annexed in 1874. With regard to parganas Fárah, Irádatnagar and Itimádpur Mr. Evans writes: "Wherever there is any mention of the parganas of Fárah and Irádatnagar, the remarks in question must refer to the former distribution, as these two sub-divisions no longer exist. Lastly, I would draw special attention to the fact that none of the statements include, or refer to, the villages lately added from Jalesar to Itimádpur: they lie beyond the limits of the area under report, and the pargana of Itimádpur, wherever spoken of by me, is the old pargana as it existed at the commencement of the settlement, and up to 1878."

3. The Agra district borders on three foreign states—Gwalior, Dholepur, and Bhartpur, which lie to the south and west. Its boundaries run with those of Muttra on the north-west, of Aligarh and Etah on the north, and Mainpuri and Etáwah on the east. It has (excluding the Jalesar villages) four great natural divisions which vary very considerably both in the character of the soils, irrigation, and the density and composition of the population, all of which are fully described in paras. 11 to 21 of the report. The trans-Jumna tract lying north of the river Jumna has an area of 417 square miles, and comprises parganas Itimádpur and Firozabad. The khadar lands along the Jumna are covered for the most part with *múnj* and *sarpat* grass, which find a ready market in Agra. Of the khadar land barely three square miles are cultivated. The ravines of the Jumna and the country under their influence cover one-fourth of the trans-Jumna tract, but about one-fourth only of this land is cultivated. The better part of it consists of grazing land. The soil of the uplands is chiefly loam of great natural fertility.

4. The parganas (Fárah, Fatehpur Sikri, Agra, Irádatnagar, Fatehabad, and North Khairagarh) lying south-west of the Jumna form the second great natural division. They contained (before the transfer of the Farah villages to Muttra) an area of

1,480 square miles. A large proportion of this tract lies between the Jumna and Utanghan rivers. It is practically one level extent of *dúmat* (loam), 81 per cent. of the revenue-paying cultivated land being *dúmat* and the rest chiefly *piliya* (a lighter soil) and *bhúr* (sandy) with a little *chiknot* (greasy clay) and *khadar* (alluvial land). But the quality and the quantity of the water available for irrigation is less than, and inferior to, that of the trans-Jumna parganas, and the land is therefore less productive.

5. The third and fourth divisions lie south of the Utanghan river and differ both from each other and from the rest of the district. The third division consists of the southern part of pargana Khairagarh. The character of the country is affected by a range of hills running along its northern boundary and numerous isolated hills, and by the watercourses which traverse it. Water is generally near the surface, but the character of the underlying strata renders irrigation difficult. The soil varies from *dúmat* (loam) to *bhúr* (sandy) with numerous patches of black clay. The loam is of poorer quality than in other parts of the district.

6. The fourth division, or pargana Pinohat, consists of a long strip of land narrow at each end and widening out towards the centre, its average breadth being eight or nine miles, and its length forty-two miles. Half of its surface is taken up by the ravines of the Jumna, Utanghan, and Chambal, the level up-lands which form the watershed being a mere ridge, in the centre of which the soil is a fine loam, in the south of a clayey character, in the west a kind of black clay resembling the már of Bundelkhand, by which name it is known here also, and in the east a genuine stiff clay which becomes somewhat sandy in the extreme east. The alluvial or low-lands bordering on the rivers are of far greater relative importance, both in point of extent and fertility, than in other parts of the district, especially the land on the banks of the Chambal which is annually flooded by that river, which deposits a fertilizing silt producing magnificent rice crops. The average depth of the water in the wells is 9 feet, ranging from 7 feet in the tract north of the Jumna to 12½ feet in pargana Khairagarh.

7. A small tract on the north-east corner of pargana Firozabad is irrigable from the Ganges canal. The irrigated area rose from 86 in 1863 to 3,770 acres in 1874. The Agra canal was practically available for irrigation for four years before Mr. Evans wrote, *i. e.*, in 1283 fasli (1875-76). In 1285 (1877-78) no less than 45,653 acres were irrigated from it. The irrigated area fell again in 1286 (1878-79) to 25,728 acres. It is not easy to understand the fluctuations in the irrigation of the several crops. A larger area under sugarcane and indigo was irrigated in 1878-79 than in the year of deficient rainfall preceding it. This is not strange, but why should only 1,599 acres of barley have been irrigated in 1877-78 against 5,112 acres in 1878-79, while 4,084 acres of cotton, 11,032 of miscellaneous kharif crops, and 10,264 of wheat were watered in the former, against 750, 7,769, and 2,493 acres in the latter year (see para. 123)? It is easy to understand the more general resort to canal irrigation in the year of deficient rain, but not to account for so much larger an area of barley being irrigated in 1878-79.

8. The zamindari and pattidari estates of the Agra parganas are fairly balanced, there being 780 of the former to 798 of the latter. The area of the latter is, however, very much larger, being 756,297 to 389,749 acres, and their average areas 948 and 500 acres.

9. There are 69 revenue-free estates in the Agra parganas (excluding the former Jalesar villages). The most important jágir is that of the Rája of Bhadawar (the head of the principal Rájput clan, the Bhadanrias), mentioned in para. 40 of Mr. Evans' report. The Board, in submitting Mr. Smith's proposals described in that paragraph, expressed their disapproval of the settlement officer's proposal to make up the Rája's income by imposing an additional demand in the zamindari villages of the jágir, and of the Commissioner's proposal to re-open the question regarding proprietary title finally disposed of in 1856, but they were very strongly in favor of Government

making up the small difference between the income derived from the Rája of Bhadawar under the existing arrangements and the sum of Rs. 50,000, the *intended* value of the jágir, either by the grant of a jagir or of a zamindari bringing in that amount, or by a money payment. Their recommendation was based on the following political grounds: The Rája is the loyal scion of a loyal house. His rank is so high that the neighbouring Rájas hold it an honor to receive the *tika* at his hands. Any consideration shown to him by Government would be appreciated not only by his own clan but also by his brother chiefs. The Rája, and doubtless the neighbouring Rájas also, considers that he has a real grievance, a feeling shared by some officers of Government. Even if he is not entitled (that is as a matter of right) to have his income made up to the amount named in the jágir grant, it would be a politic measure for Government to grant the boon. The cost would be small and would not be felt by the Imperial Government, who will receive a considerable accession to their revenue from the revised assessment of the Agra district, of which the Rája of Bhadawar is the representative chief. His Honor the Lieutenant-Governor supported most emphatically the Board's recommendation that the Rája should be liberally dealt with: "The Lieutenant-Governor is inclined to agree with the Board that the Rája has been hardly dealt with. He was a minor when the claims of the inferior proprietors were put forward, investigated and decided, and pressure was put upon him when he reached his majority to prevent him from contesting the decisions of the Civil Court as he was entitled to do. Bearing this fact in mind and also the Rája's excellent conduct during the mutiny (especially when it is considered how he had been treated by the Government a short time before), the Lieutenant-Governor considers that he is entitled to every consideration and even to further reward, and His Honor accordingly recommends that the difference between Rs. 44,642 and Rs. 50,000 be made good to the Rája by increasing his annual pension of Rs. 2,000 to Rs. 5,358. The boon, if granted, will be appreciated by a large and influential body of his countrymen, and the amount is not large, having regard to the increase in the imperial revenues which will accrue by the revised settlement of the Agra district, of which the Rája is the representative chief." His Honor's proposals were not sanctioned by the Government of India.

10. The population of the district in 1872 was 1,094,184, of whom 535,462 are agricultural and 558,722 non-agricultural. The density of population varied in that same year from 429 per square mile in Khairagarh to 1,410 or (excluding the city) 619 in pargana Agra.

11. Mr. Evans has given some interesting statistics regarding the indebtedness of tenants in five parganas in which the subject was enquired into, from which it appears that three-fourths of the tenants are in debt to the village banker, who is often also the proprietor of the village. But the indebted cultivators are not always badly off, as Mr. Smith remarks: "No doubt the great majority of cultivators are in debt to the village *saukár*. But this has been the general condition of the cultivators from time immemorial. It is only the few who will accumulate. The multitude, if they are well housed and clothed and have enough to live on and marry their children, are content to remain in debt all their lives. It does not by any means follow that their condition is a wretched one. When free from rack-renting, with only an occasional bad season and the prices of the last ten or fifteen years prevailing, they can draw on their banker without hindrance for all ordinary wants and even occasional luxuries. This is the position of the great bulk of the cultivators here, and if not an altogether satisfactory one, it does not entail much anxiety or discomfort. It is difficult to say as much of the mere *mazdurs* or unskilled labourers. These classes have their opportunity in and about Agra, where railways, canals, and other works offer fair wages. Those members of the family who care to seek for work can mostly obtain it not far off on good pay. Those who are left in the villages are certainly very poor; their work is almost agricultural, and they are chiefly paid in kind, getting just about enough to eat and the scantiest clothing." Mr. Benson writes: "A great mass of the village population have been returned as non-agriculturists who are closely allied to the agricultural population, but whom the neighbourhood of a great city supplies with work and

a means of livelihood. The canal and railway works have called for a great deal of labour of late years, and to a certain extent public works must be always going on. The present condition of this large section of the community is fairly prosperous : they can never be very well off, and have little but rags to cover them and enough grain to keep them from starvation : but this they have. In the end, however, they must come back on the soil, and, I imagine, any local distress, any famine of labor, let alone a famine of food, would be severely felt. Of the population living by agricultural pursuits the condition is better, and in many cases they show a good deal of prosperity."

12. The average holding per proprietor is a little over 26 acres. The holdings are larger in the trans-Jumna parganas. The large estate of Kotta swells the Firozabad average. The holdings range from 27 acres in Pináhat and Khairagarh to 64 acres in Firozabad. "These figures," Mr. Evans writes, "understate the area of an average zamindar's estate for two reasons. In the first place, wherever a zamindar holds in one or more villages, or maháls, or even pattis, he is reckoned as many times as his name appears in the records. In the second place, amongst the proprietors are included all the owners of small patches of land, whether paying revenue or not : they were rightly so included, but it has the effect of misleading the reader as to the average size of an ordinary zamindar's holding."

13. From the statement given in para. 55 of the report, it appears that in parganas Itimádpur and Firozabad 3,973 proprietors pay from Re. 1 to Rs. 100, against 610, paying Rs. 100 and more of revenue : only 41 proprietors pay a revenue of more than Rs. 1,000. Thákurs are the most numerous and hold the largest area. They number 12,728 and hold 337,363 acres, next follow Brahmans 11,580 with 255,601 acres, Játs 7,195 with 101,774 acres (they are found chiefly in pargana Fatehpur Sikri), Banyas 2,276 with 77,032 acres, and Musulmans 1,470 with 57,301 acres.

14. In the parganas reported on by Mr. Evans the Thákurs cultivate one-fifth of the whole area. They hold most extensively in Irádatnagar and in all the other parganas but Agra and Fatehpur Sikri, where their place is taken by the Ját (the last-named pargana borders on the great Ját State, Bhartpur); next come the Brahmans, and after them the Játs. Of the other castes, Chamárs culti vate 7, and Káchis 4, per cent.

15. Excluding Jalesar villages attached to pargana Itimádpur, the Agra district contains 3,040 villages and hamlets. The pargana average area to each main village ranges from 684 in Firozabad to 1,247 acres in Khairagarh. In the outlying parganas there are fewer hamlets than in those situated nearer Agra.

16. It is unnecessary to trace in detail the fiscal history of the Agra district narrated by Mr. Evans. The constitution of the Agra district has varied but little. It was composed immediately after the cession of its present parganas. Its first regular settlement was made in 1805-6, when it was assessed to a revenue of Rs. 11,65,008. The revenue which has lately expired was Rs. 16,29,343. The head-quarters of the North-Western Provinces removed from Agra to Allahabad in 1859.

17. In the first decade of the thirty years' settlement made in 1841, 31,203 acres were sold by auction and 112,231 acres farmed for arrears of revenue. The figures for the second decade were 1,569 and 85,363. The large resort to farms was due to the mutiny and rebellion of 1857. In the third decade about the same area was farmed and sold as in the preceding years. Within the period of the last settlement 40 per cent., *i.e.*, 477,554 out of 1,207,726 acres have been alienated, while 730,172 acres are still in the possession of the proprietors of last settlement or their successors. The

average price of land per acre transferred by (*a*) mortgage, (*b*) private sale, and (*c*) auction sale in the Agra district, was as follows in the three decades :—

	First decade.	*Second decade.*	*Third decade.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
(*a*)	... 5 5 0	6 8 0	10 3 0
(*b*)	... 4 3 0	5 12 0	11 14 0
(*c*)	... 3 7 0	5 3 0	9 2 0

Assuming the price fetched at private sale to represent most nearly the real selling value of the land transferred, we find that the price per acre had risen in the third, as compared with that of the second decade by 165 per cent. Mr. Evans has given in his 74th para. an interesting statement showing the loss and gain in landed property of the landholding castes since last settlement. The largest gainers have been Khatris, but this fact is due to the large acquisitions of the late Rao Joti Prasad, the great Commissariat contractor. The largest losers have been Thákurs, whose landed possessions are less than at last settlement by 73,482 acres, of which 28,000 were confiscated for rebellion in the mutiny. Brahmans have gained 46,154, and Baniyas 15,301, while Játs have lost 11,650 acres.

18. The accurate cadastral survey of the Agra parganas shows a total area of 1,131,980 acres, being 21,573 in excess of that of last settlement. The cultivated area has risen from 766,369 to 785,991. Mr. Evans has pointed out in his 78th para. that the classification of land in the cultivated area in the present and the last settlements differed widely : in the former new fallow was thrown out of the cultivated area, in the latter there was only heading "old waste." The comparison between present and former irrigated areas is of course affected by the comparative incorrectness of the records of last settlement. But taking the figures as they stand, the irrigated area has extended by 51,000 acres. Mr. Evans arrives at the conclusion that the cultivation of the district generally has increased but little, except perhaps in Fárah; but that this does not indicate the existence of any hostile element at work, and is rather due to the fact that there is little land left which would at present repay the cost of cultivation, none but the poorest land remaining available; that there are, however, signs of considerable general progress in respect to irrigation, but with great variation in different parts of the district, some portions having improved very much in this respect and others having remained practically unchanged.

19. Mr. Evans considers that in the Agra district the "barren lands" have been correctly put down at 231,046 acres, or 361 square miles, the total area being 1,213,945 acres or 1,897 square miles. Of the culturable land 982,899 acres or 1,536 square miles, 840,158 acres—rather more than four-fifths—are cultivated. Of the culturable but uncultivated area 86 per cent. are old waste, 10 per cent. new fallow and 4 per cent. under groves; 69 per cent. of the total area is cultivated. The area of the revenue-free lands in the Agra parganas is 61,707 acres—made of 31,913 acres, of which the muafidars are also proprietors, and 29,794 acres in regard to which the muafidars are merely assignees of the revenue which is paid to them by the proprietors.

20. Occupancy tenants have for the most part held their own since last settlement and have gained ground in the Agra and Pináhat parganas. Mr. Benson's remarks on the state of things in pargana Firozabad are deserving of attention: "The decrease in occupancy tenancy and the corresponding increase in tenancy-at-will is remarkable. No doubt, now that the legal consequences of a right of occupancy are so clearly defined, landlords are much more careful as to admitting any claim to occupancy rights, and strictly contest all claims, even where the tenants are old resident cultivators, if they can discover a flaw in title or succession. The enactment of a strict legal code destroys all the mutual trust and good faith formerly existing between landlord and tenant, causes increased litigation and embitters feeling, and, judging from results, has not improved the tenants' position as a body. At last settlement, in the Kotta taluka, 91 per cent. of the tenants were recorded as 'maurúsi' and 8 per cent. 'ghair-maurusi.' At the present time the proportions are far different, the zamindar being powerful and having taken every

means in his power to prevent the growth of right of occupancy under Act X. of 1859."

21. From enquiries made by Mr. Evans with the view of ascertaining the comparative security of the tenures of occupancy tenants and tenants-at-will, it will appear that "of the 1,239 holdings in the hands of occupancy tenants in 1853, comprising an area of 10,915 acres, 318 holdings (about one-fourth) have passed out of their hands: while of the 679 holdings and 4,117 acres that were held by tenants-at-will, more than half the holdings and two-thirds of the area have been lost by them. It is also worth noting that the 318 holdings which were lost to old occupancy tenants have been replaced by 319 holdings in which occupancy rights have been acquired under Act X. of 1859; and that 80 per cent. of the area now held by occupancy tenants is in the hands of old occupancy tenants, 20 per cent. only by those created by Act X."

22. Mr. Evans has shown (para. 98) how the measures taken at the last settlement for the protection of hereditary cultivators have altogether prevented the rents paid by them rising in any proportion to the increase in the value of the land and that the rents paid by tenants-at-will may be accepted as a guide to the same. The rent-rate at last settlement was, for the whole district, Rs. 3-2-8 per acre; that now paid by tenants-at-will is Rs. 4-4-1.

23. Mr. Evans has given very full details regarding the crops grown on the different parganas of the Agra district; of these crops there are 61·6 per cent. autumn and 43·1 per cent. spring crops, while the double cropped area is 4·7 per cent. The kharíf area is practically divided between juár, bájra, cotton, and the pulses. Juár contributes 40 per cent. In the Pináhat and Fatehabad parganas it yields to bájra. One-fourth of the kharíf area is given to cotton, which is grown more largely north of the Jumna. Sugarcane, which is fairly distributed throughout all the parganas, covers only 5,865 acres. Pulses are chiefly grown with the millets. Arhar, for instance, is grown alone in only 689 acres, but is found with juár, bájra, or cotton, on 104,635 acres. Indigo is confined almost to the trans-Jumna parganas, where canal water is available. The cultivation of both these crops is extending greatly in the country irrigated by the Agra Canal. "The variation in the crops in the kharíf harvest depends," Mr. Evans writes, "on the character of the soils, juár and cotton being chosen for the stouter soils, while bájra is the crop in the lighter and sandier lands." The double-cropped area aggregates 36,985 acres, or 4·7 per cent. of the whole cultivated area, and covers 7·6 per cent. of the kharíf and 10·9 per cent. of the rabi area.

24. Five per cent. of the kharíf and 60 per cent. of the rabi crops are grown with irrigation. The crops most largely watered are (1) sugarcane, (2) wheat and wheat with barley, (3) garden crops, both autumn and spring, (4) indigo, (5) miscellaneous food crops (rabi), (6) bejhar (wheat, barley, gram and peas), (7) wheat, gram. Only 9 per cent. of gram and 5 per cent. of cotton-growing lands are irrigated. Juár, bájra and the pulses in the kharíf, and gram in the rabi, are sown almost entirely in unirrigable lands. In his 122nd para. Mr. Evans has explained how settlement irrigation statistics give a much larger area under irrigation than is actually irrigated in any one year. He calculates that ordinarily the actually irrigated area would be just 46 per cent. of the irrigable, *i. e.*, of the area included in the settlement statistics as irrigated. Also while the area protected by a single bucket well may be estimated five acres, the area actually watered by the well is only about 2·3 acres.

25. The prices of agricultural produce have risen very considerably of late years in the Agra parganas. The rise commenced in 1860, up to which they had been almost stationary, or had fallen below what they were in the preceding 20 years. But between 1861 and 1870 there was a rise of nearly 50 per cent. over the average for the preceding decade, and prices have since shown no tendency to fall again to their former level.

26. Mr. Evans points out in his 134th para. that the soil of the Agra district is so generally and uniformly *dúmat* and *piliya*, that the valuation (the rental valuation) of the land is but little affected by the existence of limited areas of other soils, but that the classification of the lands chiefly depends on the two elements of (1) manure, and (2) irrigation. Manure converts the natural soils into the artificial, or, as they have been named by Oudh Settlement Officers, conventional soils, which are of the classes (*a*) gonda or gauhan, the "home-lands" lying round the village site, and therefore more easily manured; (*b*) manjha, the "middle zone," lying outside the home-lands also manured, and generally irrigated; and (*c*) barha or har, the outlying lands more rarely manured and irrigated, or not, according to circumstances. Taking the whole district, the artificial soils are found in the following proportions—gonda 7·4 per cent. manjha 9·3 per cent., and barha 83·3 per cent. About 17 per cent. of the cultivated area has been classed as manured and 83 per cent. as unmanured land. In Pináhat, where the villages are often built among the ravines, the distinction between the home-lands and the outlying lands in point of manure is much less marked than elsewhere. Of course the largest gonda areas are found in more densely populated parganás. After determining the areas of the artificial soils the Settlement Officer proceeded with the rent-rates prevailing in them. Naturally poor and sandy soils (bhúr) have been so improved by the application of manure and water, that they have been so fertilized as to produce very fine crops,—as Mr. Benson has stated writing of pargana Firozabad: "Constant and careful attention and irrigation with manuring have a tendency to bring all soils within one classification to a good working composite loam." Irrigation has greater effect on the value of the home-lands than of the outlying lands. The gonda lands very generally receive water, 90 per cent. of them being irrigated. The assumed rent-rates per acre on irrigated gonda range from Rs. 9-7-0 in parganas Itimádpur and Firozabad to Rs. 6-8-0 in pargana Pináhat, the district average assumed rent-rate being Rs. 8. The assumed rent-rate of dry gonda averages Rs. 5-4-0 for the whole district, the highest being Rs. 7 in parganas Irádatnagar and Agra; and the lowest Rs. 4-8-0 in pargana Fárah. Taking wet and dry gonda together, the average assumed rent-rate for the district is Rs. 7-12-0 per acre, being only four annas less than the irrigated rent-rate, owing to the very large proportion of area which is irrigated. It is much the same with manjha (middle zone) lands, though not in so remarkable a degree. The rent-rates for irrigated manjha vary from Rs. 5 per acre in pargana Fárah to Rs. 7 in pargana Irádatnagar, and for dry manjha from Rs. 3-15-0 in South Khairagarh to Rs. 6 in pargana Agra. The highest average is found in parganas Firozabad and Itimádpur, which have only 4 and 5 per cent. of dry manjha. The letting value of the outlying lands (barha or har) is very much affected by the natural quality of the soil, and little so comparatively by irrigation. For example, dry dúmat pays twice as high a rent as dry bhúr, while the rent-rate of irrigated dúmat is less than 50 per cent. above that of irrigated bhúr. Excluding riverain lands the highest rate on irrigated barha is found in pargana Khairagarh in clay (chiknot) and black (már) soil, *viz.*, Rs. 7, and the lowest in the stony soil (kakrot), in pargana Agra, Rs. 2, per acre. The highest barha dry rate is in the clay and már soils of pargana Fatehpur Sikri, Rs. 5-4-0 per acre, and the lowest, Re. 0-14-0, in the bhúr land of South Khairagarh. The average pargana rent-rate per irrigated acre ranges from Rs. 6-6-2 in South Khairagarh to Rs. 4-14-2 in pargana Fárah; and per unirrigated acre from Rs. 2-1-7 in pargana Itimádpur to Rs. 3-14-11 in pargana Irádatnagar. The average of both wet and dry rates varies from Rs. 5-2-10 in Irádatnagar to Rs. 3-10-0 in South Khairagarh. "For the whole district," Mr. Evans writes, "the average rate at which the cultivated area has been assessed is Rs. 4-7-10 an acre, which is little over Rs. 2-8-0 a survey bígha. The irrigated rate is Rs. 5-12-3 per acre (or about Rs. 3-4-0 a bígha), nearly 28 per cent. above the general rate. The dry rate is Rs. 3-4-4, a little below Rs. 2 a bígha, and is just the same proportion below the general rate as the irrigated is above it; and is rather more than half (57 per cent.) of the irrigated rate. The ratio, however, between the irrigated and unirrigated rates varies very largely from pargana

to pargana, and it is of importance to notice it, as it depends on, and gives evidence of, the peculiarities of cultivation and irrigation, which have been commented on as characteristic of the four natural divisions of the district."

27. In his 147th and following paragraphs Mr. Evans has explained the process by which the assumed rent-rates were derived from the prevalent rates, and the difficulties which the almost universal custom of fixing rents in the lump threw in the assessing officer's way. As Mr. Smith stated in his Itimádpur rent-rate report: "In every village a rough rate for, at all events, the larger soil classes is known and used, and analysis of numerous holdings will show how far it is followed in fact It often happens, too, that a cultivator has only one class of soil in his holding, in which case the rate is obvious. When these investigations have been pursued in every village and in many holdings in each village, average rates can be deduced with tolerable confidence. Of course mathematical accuracy is out of the question, but an approximation to truth may fairly be claimed." The procedure followed by Mr. Evans in assessing Fatehpur Sikri was thus explained in his rent-rate report for that pargana: "It is necessary to point out the difficulties that surround the attempt to show the actual rates for the different classes of soil. In the first place all rents are in lump sums, and are not distributed field by field, so that we are reduced to the rents of those tenants whose fields are, for the most part, exclusively in one or other class of soil. This limits very greatly the number of occupancy rents that are available for our purpose. Fortunately this is of less importance, because it is chiefly the rents of tenants-at-will and sub-tenants that must supply the standards we require, and the holdings of these last are smaller and more frequently composed of one class of soil. In the second place, the proportion of the cultivated area paying real rents is very limited. It has been shown how (I here substitute statistics applying to the district generally) 23½ per cent. of the area is held in sír: its rents are no guide; 52 per cent. is held by occupancy tenants: these rents have been artificially kept down by the leases granted at last settlement for the whole term, so that they give no true estimate of the letting value of the land. We are thus reduced to the area held by the tenants-at-will, which is but 22½ per cent. of the cultivated area, besides the limited portion held by sub-tenants in sír and other under-tenants. These facts show how limited are the statistics upon which we can draw for information as to the actual rates paid for the various soils, and it is thus only for the larger or more important sub-divisions that the instances ascertainable are sufficiently numerous to form a safe basis on which to ground comparisons. The rates payable for the smaller sub-divisions can only be arrived at by analogy." In para. 150 Mr. Evans has shown how the circumstances of individual villages necessitated a deviation from his "assumed," which after all were only "average," or perhaps more correctly "standard," rent-rates. Exemplars of the variations from the pargana standard rates in the assessment of individual villages in each of the Agra parganas are given in the tabular statement contained in para. 150.

28. A comparison of the rental, resulting from the application of the sanctioned pargana rates, with the total of village assumed rental, brings out clearly the fact that the pargana rates were fairly average rates. The former amount to Rs. 36,11,612, the latter to Rs. 36,09,050, the difference being less than one per mille. The larger divergence is only 2 per cent. (in Fatehpur Sikri). Mr. Evans rightly observes: "The villages were assessed one by one solely with regard to their individual characteristics; that the results by the two methods agree so closely is good evidence that the average rates, assumed for the parganas, fairly represented the standard towards which rents tend." The revenue calculated at a moiety of the estimated rental assets (including manorial dues, &c.) came in the Agra parganas to Rs. 18,04,897, while the aggregate of the jamas fixed by the Settlement Officer amounted to Rs. 18,07,660. The difference amounting on the whole to + Rs. 2,763 or 0·15 per cent. varies from — Rs. 3,928 in pargana Khairagarh

to + Rs. 3,660 in pargana Fatehpur Sikri, and is due mainly to the larger or smaller number of sharers among whom the profits left after payment of the land revenue demand and cesses have to be sub-divided. For instance in pargana Khairagarh where the number of sharers is 6,890, and the average holding 18 acres, the assessments ran somewhat below half of the estimated assets, and in Fatehpur, with a smaller number of co-sharers, and an average holding of 23 acres, it ran above. Sufficient allowance was not always made by the Settlement Officer, and the Senior Member in reviewing the individual village assessment has, in many instances, raised or lowered the jama proposed by the Settlement Officer, as will be seen from columns 3, 4, and 5, of the tabular statement given in para. 154.

29. The revised assessment of the Agra district, as now constituted, has been finally fixed at Rs. 18,05,030. The incidence of the jama per acre of cultivation in the Agra parganas was Rs. 2-2-5 at the last and Rs. 2-3-11 at the present settlement. Progressive jamas have been imposed where the rise in the jama was so great as to render the immediate imposition of the full revised jama inexpedient. In 1876-77 the old jama, Rs. 16,29,344, was taken throughout the Agra parganas. The revised demand began to take effect in the several parganas in different years. The full or final revised land revenue demand will not be levied till 1883-84, by which time the total additional revenue, which will have been collected in consequence of the present revision, excluding the villages transferred from Jalesar, will amount to Rs. 10,59,361, a sum Rs. 3,52,410 in excess of the cost of the revision, Rs. 7,06,951. If the term of the new thirty years' settlement commences from the date the last revised assessments came into force, the additional revenue, excluding the villages transferred from pargana Jalesar to the Agra district, will, after deducting the cost of revision, amount to Rs. 54,77,261—Rs. 7,06,951 = Rs. 47,70,310.

30. Including the revenue-free estates the local (10 per cent.) cesses amount, for the Agra parganas, to Rs. 1,79,019.

31. In the Agra parganas the date for the payment of the rabi instalment of revenue has been fixed for the 1st June, and for the kharif 6th December and 21st January.

32. Mr. Evans estimates roughly the relative cost of the three principal branches of settlement works in the Agra parganas as follows :—

	Rs.
Survey	1,00,000
Assessment	3,00,000
Preparation of record of rights	3,00,000

Or calculated on the area which has come under settlement the cost has been about Rs. 580 per 1,000 acres, of which Rs. 80 was the cost of the survey, and Rs. 500 that of the assessment and preparation of the record of rights.

33. The Senior Member recommends that the revised settlement of the Agra district be sanctioned for a term of thirty years from the commencement of 1287 fasli (1879-80), when the revised assessments took effect in Fatehpur Sikri and Khairagarh, the parganas last settled. The thanks of Government are due to Mr. H. F. Evans and Mr. T. Benson for the excellent services they have done in connection with the revision of the Agra settlement. The work was commenced, and a very large portion of it was done, by that very able and meritorious officer, the late Mr. W. H. Smith, by whose lamented death the Government have sustained a very great loss. Mr. Evans has completed the work begun by Mr. Smith with great industry and judgment and has submitted a most excellent report.

I have the honor to be,
SIR,
Your most obedient servant,
J. S. MACKINTOSH,
Secretary.

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APPENDIX.

RENT-RATE REPORT ON PARGANA, ITIMÁDPUR.
" " " " " FIROZABAD.
" " " " " PANÁHAT.
" " " " " FATEHABAD.
" " " " " (HUZUR TAHSÍL) AGRA.
" " " " " IRÁDATNAGAR.
" " " " " FARAH.
" " " " " FATEHPUR SIKRI.
" " " " " KHAIRAGARH.

Report on the Settlement of the Agra District.

INTRODUCTION.

Subject of this report.

1. In drawing up this report on the fifth regular settlement of the Agra District, I have strictly confined myself to such statistics, facts, and topics, as are connected with, or throw any light on the proceedings of the settlement, both with regard to the assessment of the land to revenue, and to the preparation of the record of rights. All other information, which, however interesting in itself, or however pertinent to the history or characteristics of the district in other respects, does not relate to either of these two branches of settlement work, will be found in the pages of the Gazetteer and other papers, but would be out of place or superfluous in a settlement report. This report, which is only the last of the series of reports which dealt with the individual parganas, differs from them in this, that, in it, the district will be considered and treated as a whole; while they necessarily treated the parganas, to a great extent, as solitary units, in this the parganas will be brought into comparison with one another, and it will be pointed out in what respects they resemble or differ from one another. It will be my endeavour to show what are the grounds, which call for and justify a difference in their assessment, whether it be owing to a difference in their fertility, their past history, or their present condition. This final report will also supplement the pargana reports by supplying that which could not be given in them, an account of the proceedings subsequent to their submission—the practical application of the assumed rent-rates, the assessment of the revenue demand, and the financial results of that assessment; and, lastly, by giving an account of other settlement operations, which, being general throughout the district, were not spoken of in the rent-rate reports. On the other hand, as those reports have been printed, I have endeavoured to avoid any unnecessary repetition of what has been already written by the officers who assessed the parganas, nor have I entered into minor details, which have been already fully discussed, and which are peculiar to the individual parganas.

Difficulty in drawing up statements owing to the change in the parganas.

2. There is one matter of detail in which I have experienced some difficulty. The area which composed the district of Agra when settlement operations commenced, and to the assessment of which this report relates, is no longer included within its limits, nor are its internal sub-divisions the same as those into which it was divided at that time. But the process of assessment, and the operations of the settlement generally, were necessarily carried out in accordance with the former distribution of the parganas. It is out of the question to draw up this report on the basis of their present distribution, seeing that the settlement was not made on that basis, and all connection between this and the pargana reports would be lost; and, in the second place, all comparison of the condition of the district, and the incidence of the assessments at the present and the last settlement would be rendered impossible. On the other hand, one object of a settlement report, *viz.*, to supply some record of the existing condition and the present assessment of the district for the purpose of subsequent inquiries and of any future settlement, would be lost sight of, if no regard were paid to the recent constitution of the parganas. I have, therefore, at the risk of multiplying statements to an unnecessary extent, given statistics on all the most important points, drawn up in accordance both with the former and the present arrangement of the parganas. In some cases where the information furnished relates solely to a comparison of the state of affairs now existing with that of last settlement, the statements and my remarks on them treat only of the old parganas: while in other instances, where the facts are of importance rather as likely to be of interest or utility in future, the statements refer only to the present parganas. I have endeavoured in all cases to make it clear to which arrangement of the parganas my remarks are applicable: but I may mention that if there be any doubt on this point in any instance, wherever there is any mention of the parganas of Farah or Irádatnagar, the remarks in question must refer to the former

distribution, as these two sub-divisions no longer exist. Lastly, I would draw special attention to the fact that none of the statements include, or refer to, the villages lately added from Jalesar to Itimádpur: they lie beyond the limits of the area under report, and the pargana of Itimádpur, wherever spoken of by me, is the old pargana as it existed at the commencement of the settlement, and up to 1878.

Progress of settlement operations.

3. Settlement operations commenced with the demarcation of boundaries on 1st September, 1872. The survey began in the following November, and field operations came to an end in the cold season of 1875-76. The work was rapidly carried out, and I can bear testimony to its excellence. The maps are exceedingly good and accurate, and admirable both in detail and finish. The gradual progress of the remaining branches of settlement work will best appear from the tabular statement given on page 3, which shows when each of the different operations was completed in each pargana, and the names of the officers who were engaged in carrying them out. During the cold weather of 1872-73 and 1873-74 the work was practically limited to surveying and the preparation of rough records. This latter division of the work was brought to an end for the whole district in the cold weather of 1876-77. Meanwhile the settlement officers' inspection had commenced in 1874-75, and would have also been completed in 1876-77, but that owing to Mr. Benson's being compelled by ill-health to take leave, it became necessary for me to re-inspect the two last remaining parganas he had gone over; so that inspection was not finally disposed of till the cold weather of 1877-78. Simultaneously with the close of the attestation of the records in the rough, the final attestation commenced in Itimádpur and Firozabad in 1876-77, and this last operation was only concluded during the past few months. The work of assessment which followed inspection and the submission of the rent-rate reports began at the end of 1876, and the revenues of the last pargana, Khairagarh, were announced in May, 1879. This cold weather has been employed in filing all the records of the two parganas last attested, the decision of enhancement cases in them, the preparation of this report and various miscellaneous matters.

Officers employed on the Agra Settlement.

4. It will be observed that the assessment of six out of the nine parganas was carried out by the late Mr. W. H. Smith. It is not for me to comment on the work of that able officer: but I may be permitted to state that the justice and moderation of his assessments have been frankly admitted by all those with whom I have had the opportunity of conversing on the subject. Mr. Benson, Assistant Settlement Officer, assessed Firozabad: he had not only inspected that pargana, but had himself attested the records in the first instance, and his intimate acquaintance with the country enabled him to effect a most satisfactory assessment. He had also inspected the Agra, Fatehpur Síkri and Khairagarh parganas, but he was unfortunately compelled by ill-heath to leave the task of assessment in the case of Agra to Mr. Smith, and of the other two parganas to myself. The greatest part of the record work was carried out by Deputy Collectors Gur Saran Das and Adhinath Tiwari. The latter was employed from the commencement of settlement work till his death in 1877; he attested the rough records of Itimádpur, Fatehabad, Farah and parts of Panáhat and Agra, and the final records of Firozabad. Munshi Gur Saran Das attested the rough records of Irádatnagar and Fatehpur Síkri and parts of Panáhat and Agra, and carried out the final attestation of the records in four parganas. Munshi Ajudhiya Parshad attested the records of Khairagarh and the final records of Agra and Irádatnagar. Munshi Behari Lal, who acted for a short time as Deputy Collector, completed the final attestation of the Fatehabad records. Maulvi Inamullah was engaged for a few months in the decision of enhancement cases. The work that devolved on the Deputy Collectors was very laborious, and entailed on them unremitting attention and industry. They also disposed of the greater part of the case work, which was (as will be seen) very considerable. I am glad to be able to report very favourably of all these officers: their conduct of their work seems to have given full satisfaction to those who were concerned in the records, the preparation of which was entrusted to them, and I am indebted to them for the zeal and perseverance with which they performed their duties.

Statement showing the progress of settlement work and the officers who were employed on it.

Pargana.	Year for which records were first attested.	Year of inspection.	Date of submission of rent rate report.	Date of Board's letter sanctioning rates.	Date of announcement of revised revenues.	Year for which records were finally attested.	*Names of the officers employed.* Attesting rough records.	Inspection.	Assessment.	Attesting final records.
Itimádpur ...	1873-74 (1281 fasli.)	1874-75 ...	20th May, 1876,	25th July, 1876,	10th February, 1877.	1284 fasli,	Pandit Adhi Nath	Mr. W. H. Smith ...	Mr. W. H. Smith ...	Munshi Gur Saran Das.
Firozabad ...	Ditto ...	Ditto ...	31st ditto ...	Ditto ...	Ditto ...	Ditto ...	Mr. T. Benson ...	Mr. T. Benson ...	Mr. T. Benson ...	Pandit Adhi Nath.
Panáhat ...	1875-76 ...	Ditto ...	7th August, 1876.	17th October, 1876.	2nd April, 1877	1285 fasli,	Pandit Adhi Nath, Munshi Gur Saran Das ...	Mr. W. H. Smith ...	Mr. W. H. Smith ...	Munshi Gur Saran Das.
Fatehabad ...	Ditto ...	1875 ...	10th November, 1876.	23rd January, 1877.	15th June, 1877,	Ditto ...	Pandit Adhi Nath...	Ditto ...	Ditto ...	Do. Behari Lal.
Agra	Ditto ...	1876 (a)...	18th August, 1877.	21st September, 1877.	20th December, 1877.	Ditto ...	Pandit Adhi Nath, Munshi Gur Saran Das ...	Mr. T. Benson ...	Ditto ...	Do. Ajudhiya Parshad.
Irádatnagar ...	Ditto ...	Ditto, ...	21st September, 1877.	1st December, 1877.	Ditto ...	Ditto ..	Pandit Adhi Nath...	Mr. W. H. Smith ...	Ditto ...	Ditto.
Farah	1876-77 ...	1876-77, ...	21st December, 1877.	31st January, 1878.	4th February, 1878.	1286 fasli,	Munshi Gur Saran Das.	Ditto ...	Ditto ...	Do. Gur Saran Das.
Fatehpur Sikri ...	Ditto ...	Ditto, (b)	15th June, 1878.	19th July, 1878,	15th March, 1879.	Ditto ...	Munshi Gur Saran Das.	Mr. T. Benson ... Mr. H. F. Evans,	Mr. H. F. Evans ...	Ditto.
Khairagarh ...	Ditto ...	1877-78, (b)	28th November, 1878.	6th February, 1879.	10th May, 1879,	Ditto ...	Munshi Ajudhiya Parshad.	Ditto ...	Ditto ...	Munshi Ajudhiya Parshad.

(a) Re-inspected in 1877.
(b) Ditto 1877-78.

The preparation of the record of rights.

5. The procedure followed in the preparation and attestation of the record of rights was the same as has been universal of late years in the settlements of these provinces, and calls for no lengthy description. The records went through a double attestation. They were, in the first instance, prepared in the rough and attested immediately after the maps and khasrahs were received from the Survey office. After a period of two or three years, during which the operations of inspection and assessment were being carried out, they were finally attested a second time and then faired. Meanwhile the village papers, annually filed by the patwáris, were compared with the rough records every year, and each change that had taken place was duly noted. In addition to the usual testing establishment in the Settlement office the kanúngos examined these final records, and compared them with the patwáris' papers for that year, and any errors or discrepancies detected in the course of that examination were set right. It will, I trust, be found that the records are as accurate as every care could render them. As I have explained in the body of my report, the status of the occupancy tenants in this district is so well established that the village papers, as far as they were concerned with the holdings of the tenants, were very fairly accurate : the real difficulty and labour lay in the preparation of the khewats, which, owing to the number of large proprietary bodies, and the careless manner in which they had been drawn up by the patwáris of late years, were in hopeless confusion, and it required great pains to set them right.

Case work.

6. In the statement on page 5 is shown the number and nature of the cases decided in the settlement courts during the currency of these operations. They reach a total of 40,719 in all. There are only two points which seem to call for notice. The first is the large proportion of cases relating to proprietary, and the small number affecting cultivating rights. These peculiarities of the Agra district, the absence of litigation between landlord and tenant, and the frequency of disputes between co-sharers owing, both to the minute sub-division of proprietary rights, and to the confused state of the khewats, will be brought to notice in several ways in the course of this report. The second point is the large proportion of the cases, four out of five, decided in favour of the plaintiff, which would seem to indicate that the action of the settlement courts was called for and beneficial, and there is less ground than usual for the suspicion that opportunity was taken of them to revive obsolete and groundless claims.

Procedure in enhancement cases.

7. As I have mentioned, most of the case work was done by the Deputy Collectors. The only branch in which I was myself engaged to any extent was that of enhancement cases. Those cases were decided in Itimádpur and Panáhat by Munshi Gur Saran Das ; in Farah, Irádatnagar and Fatehabad by Maulvi Inam-ullah; and in part of Firozabad by Pandit Adhi Nath. Most of the cases in Firozabad and those of the Agra, Fatehpur Síkri and Khairagarh parganas were decided by myself. The total number of cases is shown as 2,634 ; but this gives but little idea of their true number. Each one of those making up this number included generally the claims aganist *all* the tenants of the mahál who were being sued for enhancement, and these, in many instances, amounted to a very large total. I think I am under the mark in stating that the claims referred to at least 40,000 fields in each pargana, or some 360,000 in all. The procedure which I was finally led to adopt was as follows :—A statement was first drawn up showing each tenant's holding separately, with the rent of each field at the soil-classification and rate of the settlement officer who assessed the village, and the rent of the whole holding at these rates. An extract from this statement, referring to each individual holding, was sent with the summons to the tenant, and he was informed that if he did not appear to defend the claim and object to the accuracy or justice of the enhancement, the amount shown in the extract would be decreed against him "*ex parte*." The advantage of this procedure was that it gave information to the tenants of the amount of enhancement that would *primâ facie* be payable by them, and of the way in which their fields were classified, and the rates and method by which the enhancement was arrived at. They were thus enabled to bring to an issue at once any question of error in classification or

Statement showing the number of cases and appeals instituted and disposed of during the progress of the Agra Settlement from September, 1872, to March, 1880.

Class of application or cases.	Instituted during the currency of the settlement.	Disposed of— On their merits— For plaintiff.	For defendant.	Total on merits.	Otherwise than on their merits— By confession, compromise, or consent.	By default of plaintiff.	Withdrawn.	From any other cause.	Total decided otherwise than on merits.	Appeals to Settlement Officers from their subordinates. Instituted.	Decided. Confirmed.	Reversed.	Remanded.	Total.	Remarks.
I.—Cases connected with patwáris, section 23, *et seq* ...	918	651	177	828	3	26	1	60	90	4	3	1	...	4	
II.—Boundary disputes, sections 40, 140, 144	334	303	...	303	7	4	1	19	31	2	2	...	...	2	
III.—Cases coming under sections 43, 44, 48, 49 or 50, admission to, or exclusion from, settlement.	1	...	1	1	...	...	...	...	...	...	...	...	...	...	
IV.—Distribution of assessment or re-distribution of land and revenue under sections 46 and 47.	54	54	...	54	...	...	...	...	...	...	...	...	...	...	
V.—Sub-settlements under sections 53, 54, 55, and 56 ...	46	6	25	31	...	...	...	15	15	1	1	...	...	1	
VI.—Settlement of waste lands under sections 57, 58, and 60...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
VII.—Cases arising out of the preparation of record-of-rights. (a)—Proprietary right	28,969	24,571	2,699	27,270	186	719	10	784	1,699	348	238	75	35	348	
(b)—Cultivating right	3,307	2,275	748	3,023	48	120	12	104	284	127	100	11	16	127	
(c)—Rent-free tenure	98	52	12	64	5	23	...	6	34	...	...	...	...	...	
(d)—Revenue-free tenure ...	91	35	56	91	...	...	...	...	...	...	...	...	...	...	
(e)—Cesses, section 66	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
(f)—Any other matter under section 65.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
VIII.—Rent cases, (a)—Determination of rent on dispute.	78	15	17	32	3	8	1	34	46	...	...	...	...	...	
(b)—Ditto of rent-excluded proprietors.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
(c)—Enhancement of rent ...	2,634	1,890	109	1,999	506	90	13	26	635	322	233	82	7	322	
(d)—Abatement of rent ...	24	18	3	21	...	...	...	3	3	...	...	...	...	...	
(e)—Commutation of rent ...	6	5	1	6	...	...	...	...	...	...	...	...	...	...	
IX.—Partition of mahâls. (a)—Imperfect	11	2	3	5	...	2	...	4	6	...	...	...	...	...	
(b)—Perfect	296	95	25	120	7	77	7	85	176	20	14	2	4	20	
X.—Union of mahâls	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
XI.—Miscellaneous	3,852	2,630	112	2,742	16	41	1	1,052	1,110	81	53	19	9	81	
Total ...	40,719	32,602	3,988	36,590	781	1,110	46	2,192	4,129	905	644	190	71	905	

rating, or any other special plea they might wish to urge. It is impossible for a tenant to make any good answer to a claim for enhancement until he knows by what calculation that enhancement was arrived at. By the method I adopted he was able to see at once if his fields were wrongly classified, and if such were the case, he could plead accordingly. Another advantage was that it saved much unnecessary inconvenience to the parties, the tenants in a very large number, indeed in the majority, of cases, seeing that no objection could be made against the justice of the enhancement did not appear, and allowed the decree to pass "*ex parte.*" Had they been left without any idea of what was likely to be decreed against them, they would have been compelled to attend, though quite willing to pay any just enhancement, and in a majority of cases having no plea to urge against an enhancement calculated at settlement rates. Of course it was equally open to the zemindars to urge any plea against the correctness of the classification and rates adopted, but, as a matter of fact, this was very rarely done.

PART I.

GENERAL DESCRIPTION OF THE DISTRICT.

Boundaries, area, and internal distribution.

8. The boundaries, the area, and the internal sub-division, of the district of Agra have all undergone changes since the revision of its settlement commenced in 1872 with the operations of the cadastral survey. The first of these changes took place on the 1st April, 1874, when the pargana of Jalesar was transferred from the Muttra district and added to Agra. The second (which was made on 1st October, 1878,) consisted in the transfer to Muttra of 84 villages, the north-western half of the Farah pargana. At the same time the arrangement of the parganas was modified; to Itimádpur was added the southern portion of Jalesar; Irádatnagar was divided into two portions, that lying north-east of the Khari nadi being incorporated in Fatehabad, that to the south-west in Khairagarh; the remaining villages of Farah were added to Fatehpur Síkri; and, lastly, the exchange of a few villages between the Agra tahsíl and those adjacent to it completed the redistribution of the parganas which were thus reduced in number from ten to eight. The last change occurred as recently as 1st November, 1879, when the Jalesar pargana was transferred to the Etah district.

Area to which this report relates.

9. It is, however, to the revision of the settlement over the area which constituted the Agra district at the commencement of settlement operations in 1872 that this report refers. That area amounted to 1,213,945 acres or 1,897 square miles, and was distributed over nine tahsíls, as follows :—

	Tahsíl.	*Acres.*	*Square miles.*
1.	Itimádpur	137,027	214·1
2.	Firozabad	129,937	203·0
3.	Panáhat	218,536	341·5
4.	Fatehabad	132,139	206·5
5.	Irádatnagar	104,869	163·9
6.	Agra	117,964	184·3
7.	Farah	128,168	200·3
8.	Fatehpur Síkri	106,274	166·0
9.	Khairagarh	139,031	217·2
	Total district ...	1,213,945	1,896·8

The district at the present date having lost 67,899 acres from Farah, and having gained 41,214 acres of Jalesar (included in Itimádpur) consists of 1,187,260 acres or 1,855 square miles, and is divided into seven parganas, the areas of which are as follows :—

	Tahsíl.	*Acres.*	*Square miles.*
1.	Itimádpur	178,241	278·5
2.	Firozabad	129,937	203·0
3	Panáhat	218,536	341·5
4.	Fatehabad	154,598	241·5
5.	Agra	133,568	208·7
6.	Fatehpur Síkri	174,171	272·1
7.	Khairagarh	198,209	309·7
	Total district ...	1,187,260	1,855·0

The net result has been a decrease of 26,685 acres. The most important alteration, however, has been that of its internal organisation, which has reduced the number of the tahsíls (which are conterminous with the parganas) from nine to seven. So that the average area of a tahsíl is now 265 square miles as compared with 211 square miles, the former average.

10 The shape of the district is very irregular, none the less so since the recent changes, for the irregularity arises from the fact that to the south and west lie the foreign territories of Gwalior, Dholpur and Bhartpur, which renders it incapable of correction by any redistribution of districts. Elsewhere the bordering districts are, to the north-west Muttra, to the north Aligarh and Etah, to the east Mainpuri and Etáwah.

Natural division of the district.

11. A glance at the map of the district shows that its most important natural divisions are those which are marked out by the rivers that traverse it. The main body of the district lies to the south-west of the river Jumna, and between that river and the smaller river, the Utanghan: but there are two parganas lying north-east of the Jumna, *viz.*, Itimádpur and Firozabad, while south of the Utanghan are situated Panáhat and a portion of the Khairagarh pargana which are separated from each other by Dholpur territory. There are thus four distinct tracts——

(1) North of the Jumna, Parganas Itimádpur, Firozabad.
(2) Between the Jumna and Utanghan, Parganas Farah, Fatehpur Síkri, Agra, Irádatnagar, Fatehabad, and North Khairagarh.
(3) South of the Utanghan, South Khairagarh.
(4) Ditto ditto Panáhat.

The necessity of bearing in mind this natural sub-division of the district will be constantly impressed on us, when we investigate the varying characteristics of the different parganas. It will be found that in respect to all those elements which go to make up the fertility of the country and the condition of the people, whether we look to the character of the soil, the nature of the irrigation, the density and composition of the population, the value of land as shown in its selling and letting price, in all alike these tracts differ from one another to a very marked degree, while each within its own limits presents considerable uniformity; so that the variations to be met with in the different parganas are found eventually to resolve themselves into the variation existing between these four tracts. In giving a general description of the physical feature of the district, it is necessary to treat each of these tracts separately.

Description of the country north-east of the Jumna.

12. In the Trans-Jumna tract, which contains an area of 417 square miles, the physical character of the country is much affected by the Jumna flowing along the southern boundary, and three small streams of the Jhirna, which passes through the western portion of Itimádpur and falls into the Jumna near Shahdara, and the Sirsa and Sengar nadis, which traverse the northern portion of Firozabad. The course of the Jumna* "is full of numerous turns and twists, sometimes running due east, sometimes bending south and sometimes north, and all along its bank branch out deep and extensive ravines formed by the drainage of the country above. The banks are mostly steep and rarely change their position. In places they form into lofty headlands. Below these steep banks is generally a narrow sloping shore, and in exceptional villages there are wide stretches of either alluvial soil, or sand of comparatively recent formation." Similar in character, though of course smaller in extent, are the ravines of the Jhirna, which begin to form as that stream enters this district, and rapidly increase as the Jumna is approached. The Sirsa and Sengar nadis are mere rain-streams. They run almost parallel to one another in a south-easterly direction, the former with a course of 12 miles from Katki to Nepal, and the latter to the north-east of it running for seven miles between Ritoli and Kotla. The lowlying land inundated by the Sirsa

Its rivers.

* NOTE.—The inverted commas here and elsewhere in this report denote quotations from the Pargana Rent-rate Reports.

at the upper portion of its course and the sandy rises marking the valley of the Sengar, are the chief natural features of the country drained by these streams.

The ravines.

12*a*. The ravines not only occupy a considerable area themselves which they render totally unculturable, but " they produce much poverty and infertility of soil in the lands about them. In parts the ground is broken, uneven and cut up by small channels leading to the deeper hollows, and in parts, where any perceptible slope begins, the surface soil is so washed away as to leave scarcely enough mould for the seed to germinate." Such soil as is left is full of nodules of kunkar, and is here known as *kakret*. " For the most part the ravine area is fringed with a belt of sandy soil of varying width, where irrigation is impracticable and produce poor and uncertain." The total area within the influence of the ravines is about 100 square miles, nearly one-fourth of the whole area of the tract; and here only one acre in four is cultivated, whereas elsewhere cultivation covers more than four acres out of five. The chief use to which these lands are put is for grazing purposes. They are singularly devoid of trees, though it is one on which the babul flourishes, and so great is the demand for charcoal in the city close at hand that any one planting out these ravines with that tree would be amply repaid.

The alluvial lands.

13. Between the ravines and the river lies the khadir land which is " chiefly limited to narrow strips lying immediately under the high land, though occasionally there are extensive plains of real khadir; these are for the most part untouched by the plough and covered with munj and sarpat grass, for which there is a ready market in Agra." The cultivated khadir is limited to 1,914 acres, barely three square miles.

The level uplands.

14. There still remains the most extensive and most important portion of this tract, the country above the ravines and beyond their influence. Its surface is level and unbroken, and the soil, with rare exceptions, a productive loam somewhat light in character and of a yellow colour, classed as dúmat or piliya. " Here and there in isolated villages may be found a narrow ridge of sandy hillocks, but for the most part the tablelands are of the finest soil and great natural fertility."

The country south-west of the Jumna.

15. To the south-west of the Jumna lies the greater part of the district, consisting, before the transfer of the Farah villages to Muttra, of 1,480 square miles. Of that portion of the district a large proportion lies between the Jumna and its tributary, the Utanghan. The Utanghan (or Banganga, as it is also called) rises in the hills near Jaipur, and has therefore run a considerable course before it touches the border of this district at Siroli in the south-west corner of the Fatehpur Síkri pargana. After skirting the southern limit of that pargana, it passes through Khairagarh, and, after some miles through Dholpur territory, finally flows between the Fatehabad and Panáhat parganas till it falls into the Jumna. It thus cuts off from the main body of the district a portion of Khairagarh and the whole of Panáhat. This channel drains a large area of country and consequently carries off a large body of water during the rains, though at other times it is nearly dry. Where it passes by Fatehpur Síkri and Khairagarh it is wide and shallow, its banks low and of sandy soil, its course shifting slightly from year to year. Along the border of Panáhat it runs between more lofty banks of stiffer soil cut up by numerous ravines, some of which penetrate deeply into the adjoining lands. The only other stream of importance in this tract is the Khari nadi, which, after flowing east and south-east through Fatehpur Síkri, divides the new parganas of Khairagarh and Fatehabad, and finally falls into the Utanghan. It resembles the Utanghan on a much smaller scale, inasmuch as it is a rain-torrent flowing at first in a shallow channel with low banks, but towards the end of its course lined with deep and precipitous ravines.

The Utanghan.

The Khari nadi.

The western despression.

16. Besides this there is no other stream worthy of mention, the whole country being singularly barren of any defined drainage channels. But any account of the fluvial system of this portion of the district would be incomplete without a mention of what is known amongst the natives as the ' Nahra' or ' Dahar ' and is generally termed the " western depression." There is no doubt that in this depression there once ran

a river which carried off the drainage of the central portion of this tract. Its characteristics are precisely similar to those of the two rivers just described. Entering the district at the north-west near Ol in Farah "the bed, though of great width, is so shallow that it is difficult to follow the course with the eye except by noting the exceptional richness of the crops on the surface." Passing eastwards through the Agra pargana, banks appear on either side of poor kunkary soil, while the channel becomes a distinct tract of good rabi cultivation, and these characteristics continue through the new pargana of Fatehabad until nearly the end of its course where ravines of some depth line either side. Even now it carries off much of the drainage, and the whole of its bed is conspicuous for its fertility owing to the proximity of the water level to the surface of the ground.

Character of the soil.

17. The paucity of streams fully explains the great uniformity in the superficial aspect of the country. It is practically one level extent of the loam soil commonly called dúmat. Indeed, the immense preponderance of dúmat, the comparative absence of any variation either to clay on the one hand, or the sandy soils, piliya and bhúr, on the other, is remarkable. Of the 459,487 acres of revenue-paying cultivated land included within its limits, no less than 373,815 acres, or 81 per cent., are dúmat; the remaining 85,672 acres being chiefly piliya and bhúr, with a little chiknot and khadir. On the whole, there would seem to be no great inferiority in the soil itself as compared with that of the trans-Jumna tract, but, as will be seen, both in the quantity and quality of the water available for irrigation, there is a marked difference, resulting in a very decided inferiority in its ultimate fertility.

The ravines.

(1) Along the Jumna.

(2) Along the Utanghan and Khari nadi.

18. The only extensive contrast to this general uniformity is to be found in the ravines along the Jumna, Utanghan, and Khari nadi. In the case of all these rivers the ravines gradually increase in depth and extent of penetration as they pass from west to east. The Jumna ravines, for instance, in Farah, "occupy but a very limited area of the pargana and break up the surface for a very short distance from the river line;" in Agra they are "sufficiently marked and distinct to form a permanent natural feature, an average width of a mile or more from the river being cut up, and, as a rule, rendered unculturable by the water-courses;" in Fatehabad, for a short distance, "they almost disappear, the highlands gradually sloping down to a low bank of alluvial land," but they soon re-appear, and, "becoming deeper and broader as the stream flows east, gradually rival in depth and extent those of Itimádpur, Firozabad, on the other side of the river," and they continue to be of this character along the northern side of Panáhat. The ravines of the Utanghan and Khari nadi are similar in character, though on a much smaller scale. Lastly, along the banks of both Jumna and Utanghan are the khadir or kachhar lands, generally only a narrow slope of land, but which occasionally expand into wider alluvial plain.

The country to the south of the Utanghan.

19. Finally, we have the two isolated tracts south of the Utanghan. Westwards is that which forms the southern portion of Khairagarh, and runs out like a promontory of land pushing between the territory of Bhartpur on the north and Dholpur on the south, and eastwards that composing the tahsíl of Panáhat. These two tracts are unlike each other and the rest of the district.

(a) Khairagarh.

20. In Khairagarh the character of the country is affected by a range of hills along the north boundary and numerous isolated hills scattered within its limits and by the watercourses which traverse it; the soil varies considerably from dúmat to bhúr, and there are numerous patches of blackish clay; water is generally at no great distance from the surface, but the character of the underlying strata renders irrigation difficult. It is in these frequent and extensive variations in the soil that this tract differs most remarkably from the rest of the district; the proportion of the normal dúmat is smaller than elsewhere, and much of what dúmat there is, is of a markedly less fertile character.

(b) Panáhat.

21. The physical features of Panáhat are peculiar to that pargana, and are very dissimilar to any met with elsewhere. It consists of a long strip of land, narrow at either end, but widening out towards the centre, with an average breadth of no more

than eight or nine miles to a length of 42 miles. Lying between the Utanghan and Jumna on the north and the Chambal on the south, half the surface of the country is occupied by the deep and far spreading ravines of these rivers; and the level uplands which form the watershed are a mere ridge or narrow strip between them. The soil on this watershed is, in the centre, a fine loam which becomes sandy as the ravines on the north are approached; southwards above the ravines of the Chambal, the soil is not sandy, but of clayish character, to the west a kind of black clay resembling the mâr of Bandelkhand by which name it is known here also, and eastwards a genuine stiff clay, which, however, becomes somewhat sandy in the extreme east. Again, in this tract the kachhar lands are of far greater relative importance, whether their extent or fertility be considered, than is the case in other parts of the district. The Jumna kachhar, indeed, here as elsewhere, consists for the most part of a narrow margin of land, though "here and there, as about Batesar to the north and Khilawali to the south-east, there are beautiful level plains of rich soil." But the Chambal kachhar is of a character peculiar to itself: "sometimes it forms the floor of a vast hollow in the ravines far away, it may be, from the river side, but only just above the water-level; sometimes it follows the course of a nála, while elsewhere it will be an undulating and irregular tract of soil rising in hillocks from the river banks; and lastly there are numerous stretches of low river bank. The fertility of this large area of land is derived from the annual flooding of the Chambal, which deposits a fertilizing silt upon it producing magnificent rich crops."

Irrigation.

22. The broad conclusion to be drawn from the foregoing description is, that the soil of the district generally is one of great uniformity, and we must look elsewhere for the cause or causes, which give rise to the variation in the productiveness of the soil, that undoubtedly exists amongst its different portions. The most important of these causes is to be found in the difference in the means of irrigation.

Well-irrigation.

23. The effectiveness of irrigation depends partly on the quantity, partly on the quality, of the water available for that purpose. The first element, the quantity of the supply, varies with the distance of the water-level from the surface of the ground, the character of the underlying strata in which the water is found, and the depth of water in the well. For the first two of these conditions determine the cost of the construction and maintenance of the well, and the first and last the extent of its irrigating powers when constructed.

Depth to the water-level

24. The variation in the distance of the water-level is shewn roughly but with sufficient accuracy in the map opposite page 10. This map was compiled in this way: in the course of the survey the depth to the water-level in every village was ascertained and the average depth in the case of the ordinary earthen wells (as being the most numerous) was noted in the case of each village on a pargana map. The areas over which the distance of the water varied within certain limits being thus ascertained, the border lines of these areas were transferred to the district map on a smaller scale. The colouring of the map shews the limits within which the water lies at depths from 1 to 20, 20 to 40, 40 to 60, and 60 to 100 feet; and the dotted lines, where found dividing these areas, indicate the boundary lines between the more minute sub-divisions, in which the variation is limited to a range of 10 feet.

(1) North of the Jumna.

25. With respect to the Trans-Jumna tract there is little to be said; isolated as it is, with artificial administrative limits, we cannot expect to find any signs of a general law as to the position of the water-level. But it may be noted that it is nearer to the surface in the western pargana of Firozabad, where the distance ranges from 20 to 50 feet, lying generally between 30 and 40 feet, while in Itimádpur it is never nearer than 30 feet, and in a great part of the pargana is from 50 to 60 feet, in parts exceeding even 80 feet.

(2) South of the Jumna.

26. Crossing to the south of the Jumna, we first reach the Doab area between that river and the Utanghan comprising the three new parganas of Fatehpur Sikri, Agra and Fatehabad. This tract lies within natural boundaries, and the map shews

clearly that there is a marked gradual sinking of the water-level from the surface of the country as we pass from west to east. In Fatehpur Sikri, the most western, the water in the extreme west is found from 10 to 20 feet from the surface, falls to 20 or 30 feet in the centre, and in the east of the pargana drops still further to 30 or 40 feet. Next in the Agra pargana the ordinary limit is from 30 to 40 feet, falling occasionally to 50 feet. In Fatehabad, again, further east, the normal depth is from 40 to 50 feet in the west and from 50 to 60 in the east, while in a few places it exceeds 60 feet. The same tendency is observable in the portion of the Khairagarh pargana north of the Utanghan where the general range is from 20 to 40 feet. South of the Utanghan the two tracts of land differ from the rest of the district in opposite directions. In Khairagarh the distance of the water is generally from 10 to 20 feet, and only over a limited area does it exceed 20 feet, so that in this tract we have the water at a minimum distance. In Panáhat we have the maximum, water to the west being from 60 to 80, in the east from 80 to 100 feet below the surface level. The general slope of the country is from north-west to south-east, but these facts show that the fall in the water-level is more rapid than that of the surface level of the country.

The character of the under-lying strata.

27. The second condition regulating the supply of water is the character of the stratum in which the water is found. The wells of the district may be divided into three classes, the masonry well with its shaft of brick-work or stone, the gadawali well with its wooden cylinder (which is chiefly confined to the trans-Jumna tract), and the ordinary earthen well in which coils of twigs form a sufficient support to its sides. It is chiefly with reference to the consistency of the water-producing strata that a choice has to be made between the masonry well, on the one hand, and the gadawali or earthen well, on the other; and we may therefore, find some clue to the nature of these strata in the different parganas in the comparative frequency of the different classes of well. Following the new arrangement of the parganas (which is that adopted in the map under discussion) we find in Itimádpur that only 5 per cent. of the wells are masonry, while 58 per cent. are gadawali and 37 per cent. earthen; so that practically it is never necessary to build a masonry well. In Firozabad, 4 per cent. are masonry and the remaining 96 per cent. either gadawali or earthen, 79 per cent being of the latter class. In Fatehpur Sikri the proportion of earthen wells is only 77 per cent., as many as 23 per cent. being masonry. In the Agra tahsíl earthen wells include 87 per cent., in Khairagarh north of the Utanghan 89 per cent., and in Fatehabad as many as 97 per cent. of the total number; south of the Utanghan in Khairagarh masonry wells are to earthen wells in the ratio of 3 to 2, but in Panáhat as only 1 to 10.

Resulting character of the irrigation.
(a) North of the Jumna.
(b) Between the Jumna and the Utanghan.

28. From these facts the following conclusions may be deduced:—

In the trans-Jumna tracts the stratum in which water is found is almost universally strong firm soil, and it is only in respect of the distance of the water-supply that Itimádpur labours under some disadvantage. South of the Jumna the water lies in soil, the consistency and stability of which clearly increases as the depth to the water-level increases, so that the disadvantage in the increase of the latter is compensated for by the improvement in the former. South, again, of the Utanghan we have similar combinations; Khairagarh, with its water-level close to the surface, but with a subsoil frequently necessitating the use of masonry, and Panáhat with water at a very great depth, but able in nine cases out of ten to effect its irrigation from an earthen well. That each of these two elements, the depth of the water and the character of the subsoil, is of some influence, will appear from a consideration of the proportion of the cultivated area that is irrigated under the different conditions described above. In Itimádpur 72, in Firozabad no less than 84, per cent. of the cultivation is irrigated, and this is doubtless owing to the facility of making wells. In Fatehpur Sikri the proportion drops to 56 per cent. but increases again in the Agra pargana to 67; in Fatehabad it falls again to 61. Thus the defect in the substrata in the first named pargana more than outweighs the advantage of a water-supply at from 20 to 30 feet, while in Agra, in spite of the increased depth to the water-level (now 40 feet) a firmer subsoil allows of a much greater extent of irrigation. The cause which leads to the falling

(c) South of the Utanghan.

off of the irrigation in Fatehabad will be noticed shortly. Lastly, that a serious defect in either respect is fatal to the irrigation of any tract, is shewn by the examples we have in South Khairagarh and Panáhat of precisely opposite conditions. In South Khairagarh, south of Utanghan, in spite of water being but 15 feet from the surface, there is only 33 per cent. of irrigation, owing to the faulty substrata; while in Panáhat, the other cause, the distance of the water at from 80 to 100 feet, gives a similar result, irrigation covering only 22 per cent. of the cultivation, in spite of favorable conditions as to the underlying strata.

Difference of irrigation in Khairagarh and Panáhat.

29. Though the directly opposite conditions of South Khairagarh and Panáhat lead in one respect to the same result, *viz.*, a great deficiency in irrigation, yet they really give rise to an essential difference between the tracts in regard to the relative value of irrigated and dry lands. The characteristic of South Khairagarh is that wells cannot be made except over limited areas, and in certain, not numerous, localities; but when they can be made at all, there is no great difficulty in their construction or working. In Panáhat, however, wells *can* be made practically everywhere, but the depth to the water-level is so great that the cost of their construction and of irrigation from them is very great. It necessarily follows that in Khairagarh the value of the land which owes its irrigability to a fortunate accident of position, involving no great cost to the cultivator, exceeds that of the lands *unirrigated because unirrigable* to a very great extent; while in Panáhat land which is irrigated, but only at a great cost, is but little more valuable than land unirrigated, though equally irrigable as far as natural causes are concerned. Accordingly, we shall find that the rents paid for irrigated and unirrigated lands in these two tracts follow this rule, diverging very greatly in Khairagarh and approximating very closely in Panáhat.

Depth of the water-supply.

30. But the variations in the depth of the water in the wells must also be considered. The average depth throughout the district is 9 feet of water. North of the Jumna, in both Itimádpur and Firozabad, it only amounts to 7 feet, south of the Jumna the supply is ampler, being in Fatehpur Síkri 10 feet, in Agra 13, in Fatehabad 7, in Panáhat 8, and Khairagarh 12½. It is probably owing to this deficiency in depth of water that the percentage of irrigation in Fatehabad is lower than in the adjacent tahsíl of Agra.

Quality of the water.

31. In respect to quality, water may differ in being sweet, brackish (khari) or salt (telia.) In the trans-Jumna parganas, in Fatehabad, Panáhat, and most of Khairagarh, there is little to complain of, the water being generally quite sweet enough for agricultural purposes: but in Fatehpur Síkri there is a very large proportion of brackish or salt water, and this defect is met with, though to a much smaller degree, in the Agra tahsíl. The character of this brackish water has been thus described. As a general rule, "when the rains are scanty, flooding becomes necessary to soften the ground before ploughing and sowing, and when water is sweet, a considerable amount of land is probably cultivated in this way during year of drought. But where the water is brackish or salt, the cultivator, in the midst of wells, is for the most part no better off than if he were in a wholly unirrigable country. The noxious elements of this water destroy the seed and prevent its germination, so that unless the seed is sown in a soil saturated with rain, cultivation is hopeless." This was strikingly exemplified last year, when, owing to the scantiness of the rain in September, 1878, very large areas in Fatehpur Síkri were of necessity left unsown, though the land had been previously ploughed and otherwise fully prepared for a crop, and the spectacle of a well in working order surrounded by land tilled but unsown, owing to the character of its water, was by no means uncommon.

The facts here brought together shew clearly the weak points in the different parganas. Fatehpur Síkri suffers from brackish water and a sandy subsoil. Fatehabad from an insufficient depth of water in its wells, Panáhat from the great distance to the water-level, and South Khairagarh from the character of the underlying strata. The irrigation of the Agra tahsíl is to some extent spoilt by the brackish water, but is otherwise fairly satisfactory. In Itimádpur and Firozabad, especially the latter, there is little to be desired in any respect, and their condition

renders it plain that the most important element is that of the character of the stratum in which water is found; neither a somewhat scanty supply of water nor the necessity of raising it from a considerable depth being any serious impediment to a very general spread of irrigation. These last drawbacks tend rather to diminish the area irrigable from each well, and so to raise the cost of irrigation; for we find that in Panáhat, with water at the greatest distance, and in Fatehabad, with the smallest depth of water, the area irrigated by each bucket is only four acres, the general average of the district being five acres per láo.

The kinds of well made use of.

32. Of the three kinds of wells found in this district the 'gadáwali,' or well with a wooden cylinder, is rarely met with except in the Trans-Jumna parganas, where it is very common. The construction of a well of this class costs from Rs. 40 to Rs. 80, and it lasts from, perhaps, 10 to 15 years. The average area irrigated from a single bucket is 6 acres, and this, it is worthy of note, is a larger area than is covered by earthen or even masonry wells. In both Firozabad and Itimádpur the masonry wells only irrigate 5 acres, and in Fatehabad the only other pargana where these wells are found, they still irrigate 6 acres though the earthen wells only water 4 acres.

(1) The gadáwali well.

(2) The masonry well.

33. Masonry wells are either built up in the usual way with brickwork cemented with mortar; or they may be of the class called 'khandua' in which the shaft is built up with blocks of stone duly shaped, but without mortar. The process of constructing this latter class of well has been described in detail in the Khairagarh rent-rate report. Its chief peculiarity is that it is built up from below and the cylinder is not sunk from above, as in other wells. North of the Jumna the ordinary brickwork well only is found; but in the west and south-west of the district, especially in Fatehpur Síkri and Khairagarh, the stone well is most common. While the brickwork well is designed to penetrate to the spring, the stone well is generally fed by percolation only, for which reason it is that the use of mortar has to be dispensed with. The average area protected by each bucket working in a masonry well is 5¾ acres, varying from below 4 acres in Panáhat to 7 acres in Fatehpur Síkri. The cost of construction may be reckoned at from Rs. 200 to Rs. 300 per láo; but so many conflicting conditions affect the question of cost in each individual case, that any average estimate is of little value. It is hardly necessary to describe the earthen well; here it almost invariably requires the support of a cylinder composed of coils of twisted stalks of the arhar or cotton plant or the farásh tree. Wells without this contrivance, called 'ajár,' are very rare. The earthen well irrigates on an average 5 acres per bucket. In Fatehabad and Pináhat this falls to 4 acres, but it is exceeded in Fatehpur Síkri and the Trans-Jumna parganas. The statistics which have formed the basis of the foregoing remarks are shewn in the statement on page 14.

(3) The earthen well.

Canal irrigation.

34. Besides the irrigation from wells there is a certain amount of canal irrigation. It is derived partly from the Etáwah branch of the Ganges Canal and partly from the new Agra Canal. The former is confined to a limited area in the north-east corner of Firozabad; it commenced in 1863, and at the time of assessment the area irrigated was 2,878 acres, of which 958 acres were in *one* village, Kaitha. The returns show that the area irrigated had risen from 86 acres in 1863 to 3,770 acres in 1874. The irrigation from the Agra Canal is, however, the most important as far as this district is concerned.

Its total extent, year by year, has been as follows:—

		Acres.
1283 (fasli) or 1875-76 (A. D.)	...	6,172
1294 ,,	...	13,524
1285 ,,	...	45,653
1286 ,,	...	25,728

It was abnormally large in 1285 fasli, as, owing to the failure of the kharif harvest, every effort was made to sow as large an area as possible in the rabi; but the area watered in 1286 fasli shows accurately enough the limit it has now reached, and

Statistics of wells, and well irrigation.

	Pargana.	Wells out of use.				Wells for drinking purposes.				Wells for irrigation.				Number of láos.				Irrigated area in acres.				Average area irrigated per láo.				Depth of water.				Depth from surface to water.			
		Pucka.	Gadaoli.	Kucha.	Total.	Pucka.	Gadaoli.	Kucha.	Total.	Pucka.	Gadaoli.	Kucha.	Total.	Pucka.	Gadaoli.	Kucha.	Total.	Pucka.	Gadaoli.	Kucha.	Total.	Pucka.	Gadaoli.	Kucha.	Total.	Pucka.	Gadaoli.	Kucha.	Total.	Pucka.	Gadaoli.	Kucha	Total.
Old Parganas.	Itimádpur	110	529	1,038	1,677	16	52	64	132	457	5,838	3,674	9,969	692	7,543	4,208	12,443	3,490	46,758	22,030	72,278	5	6	5	6	11	7	6	7	55	53	43	49
	Firozabad	273	53	807	1,133	105	54	309	468	402	1,873	8,857	11,132	739	2,442	10,030	13,211	3,636	14,138	55,232	73,006	5	6	5½	5½	8	8	7	7	35	36	35	35
	Panáhat	184	...	1,465	1,649	593	4	887	1,484	639	50	5,097	5,786	955	50	5,153	6,158	3,890	235	20,694	24,819	4	4½	4	4	10	9	7	8	75	73	70	70
	Fatehabad	119	22	1,851	1,992	116	4	790	910	535	183	9,523	10,249	1,238	190	10,073	11,501	6,679	1,132	43,825	51,636	5	5	4	4	16	11	7	7	38	55	45	45
	Farah	221	3	2,178	2,402	194	5	199	398	955	35	6,588	7,578	1,782	38	6,645	8,465	11,017	277	33,790	45,084	6	6	5	5	16	8	9	10	29	34	36	35
	Irádatnagar ...	272	..	2,698	2,970	132	...	97	229	683	11	8,886	9,580	1,236	10	8,799	10,045	6,015	71	41,312	47,398	5	7	5	5	13	8	9	9	35	39	34	34
	Agra	382	19	3,019	3,420	504	15	408	927	1,220	96	8,596	9,912	2,159	111	8,758	11,028	10,281	690	46,086	57,057	5	6	5	5	18	15	12	13	45	39	44	44
	Fatehpur Síkri ...	283	1	1,089	1,373	302	...	72	374	1,522	4	3,221	4,747	2,561	4	3,235	5,800	20,512	32	20,327	40,871	8	8	6	7	16	15	8	11	20	19	22	21
	Khairagarh ...	219	...	625	844	172	...	57	229	2,093	..	3,350	5,443	3,386	...	3,567	6,903	18,339	...	15,802	34,141	5½	...	5	5	17	...	11	14	22	...	21	21
	Total ...	2,063	627	14,770	17,460	2,134	134	2,883	5,151	8,509	8,090	57,797	74,396	14,698	10,388	60,468	85,554	83,859	63,333	299,098	446,290	6	6	5	5	14	10	9	9	44	47	42	42
New Parganas.	Itimádpur	110	529	1,038	1,677	16	52	64	132	457	5,838	3,674	9,969	692	7,543	4,208	12,443	3,490	46,758	22,030	72,278	5	6	5	6	11	7	6	7	55	53	43	49
	Firozabad	273	53	807	1,133	105	54	309	468	402	1,873	8,857	11,132	739	2,442	10,030	13,211	3,636	14,138	55,232	73,006	5	6	5½	5½	8	8	7	7	35	36	35	35
	Panáhat	184	...	1,465	1,649	593	4	887	1,484	639	50	5,097	5,786	955	50	5,153	6,158	3,890	235	20,694	24,819	4	4½	4	4	10	9	7	8	75	73	70	70
	Fatehabad	147	22	2,903	3,072	138	4	810	952	564	187	12,734	13,485	1,058	193	13,172	14,423	5,074	1,149	58,393	64,616	5	5¾	4½	4½	16	11	7	7	38	55	45	45
	Agra	349	13	3,173	3,535	517	12	411	940	1,449	51	9,099	10,599	2,752	62	9,161	11,975	13,519	345	47,328	61,192	4	6½	5	5	18	15	12	13	45	39	44	44
	Fatehpur Síkri ...	436	1	2,858	3,295	457	...	210	667	2,095	35	7,045	9,175	3,831	32	6,809	10,672	29,253	255	37,656	67,164	7	8	5	6	16	10	9	10	28	34	24	25
	Khairagarh ...	438	6	1,911	2,355	242	3	103	348	2,450	48	7,978	10,476	4,019	52	8,313	12,384	21,733	377	38,333	60,443	5	7	5	5	17	14	11	12	34	38	34	34
	Total ...	1,937	624	14,155	16,716	2,068	129	2,794	4,991	8,056	8,082	54,484	70,622	14,046	10,374	56,846	81,266	80,595	63,257	279,666	423,518	6	6	5	5	14	10	9	10	44	47	42	42

that it has quadrupled in four years. The area recorded as irrigable from this canal at the time of survey (which varied for the different parganas) was as follows :—

		Acres.
Pargana Farah	... ...	3,956
„ Fatehpur Síkri	...	489
„ Agra	... ...	2,603
„ Fatehabad	... ...	382
„ Irádatnagar	... ...	2,542
Total	...	9,972

35. It will be well here to explain how this canal-irrigated area has been assessed. In Firozabad the area irrigated from the Ganges Canal was assessed at irrigated rates, in the same way as has been done in all the districts irrigated from that canal. In the rest of this district, however, anywhere, that is, south of the Jumna, the area irrigated from the Agra Canal has been assessed under the orders of Government at dry rates. Thus, on account of this canal-irrigated area, and for all the lands which were actually dry and were so assessed, and which shall at any time receive canal irrigation, the zemindars will be liable to the payment of the 'owners' rate'

The assessment of the canal irrigated area.

36. There is a small, indeed quite insignificant, area irrigated from rivers and ponds, one of the most marked features of the country being the absence of jhils and ponds.

Irrigation from rivers and ponds.

37. The annual rain-fall in each tahsíli town has been given in the pargana reports. It will be sufficient to bring together the most noteworthy facts connected with its distribution over the district. The average rainfall from 1862-63 to 1878-79, with the maximum and minimum for each year, will appear from the following table:—

Rain-fall.

Year.	Average rain-fall in district.	Maximum.		Minimum.		Difference between maximum and minimum.
		Tahsíl.	Amount.	Tahsíl.	Amount.	
1862-63 ...	25·9	Fatehabad ...	31·5	Agra ...	22·1	9·4
1863-64 ...	29·1	Itimádpur ...	31·0	Irádatnagar ...	23·9	7·1
1864-65 ...	20·8	Khairagarh ...	22·8	Farah ...	18·1	4·7
1865-66 ...	21·6	Irádatnagar ...	26·1	Fatehabad ...	15·7	10·4
1866-67 ...	25·4	Firozabad ...	29·4	Fatehpur Síkri ...	22·1	7·3
1867-68 ...	36·5	Irádatnagar ...	42·7	Khairagarh ...	30·3	12·4
1868-69 ...	14·1	Itimádpur ...	19·6	Fatehpur Síkri ...	6·6	13·0
1869-70 ...	29·3	Farah ...	37·1	Fatehabad, Firozabad	21·8	15·3
1870-71 ...	30·0	Fatehpur Síkri ...	51·8	Fatehabad ...	18·1	33·7
1871-72 ...	29·1	Agra ...	37·8	Farah ...	21·2	16·6
1872-73 ...	24·0	Irádatnagar ...	30·0	Fatehabad ...	17·5	12·5
1873-74 ...	40·5	Ditto ...	65·3	Ditto ...	26·6	38·7
1874-75 ...	31·8	Itimádpur ...	37·7	Farah ...	25·3	12·4
1875-76 ...	30·3	Ditto ...	32·9	Firozabad ...	23·3	9·6
1876-77 ...	25·1	Ditto ...	32·3	Fatehpur Síkri ...	15·5	16·8
1877-78 ...	13·6	Ditto ...	16·4	Khairagarh ...	8·9	7·5
1878-79 ...	17·9	Fatehabad ...	22·2	Farah, Fatehpur Síkri.	12·6	9·6
1862-79 ...	26·1	Irádatnagar ...	27·9	Fatehabad ...	23·4	4·5

The average rain-fall for each tahsíl for the same period of 17 years, with the maximum and minimum that fell in any one year, is as follows :—

Tahsíl.	Average annual fall.	Maximum.		Minimum.		Difference between maximum and minimum.	Number of years in which the rain-fall was			
		Year.	Amount.	Year.	Amount.		Above average.	Below average.	Maximum.	Minimum.
Itimádpur ...	27·1	1867-68 ...	40·8	1877-78 ...	16·4	24·4	12	5	6	...
Firozabad ...	25·7	Do. ...	40·6	Do. ...	15·0	35·6	10	7	1	2
Panáhat ...	25·5	Do. ...	36·1	Do. ...	13·8	22·3	10	7	...	...
Fatehabad ...	23·4	Do. ...	34·0	1868-69 .	9·7	24·3	6	11	1	5
Agra ...	26·8	1871-72 ...	37·8	1877-78 ...	10·3	27·5	11	6	1	1
Irádatnagar ...	27·9	1873-74 ...	65·3	Do. ...	11·3	54·0	8	9	5	1
Farah ...	26·4	1870-71 ...	46·8	1868-69 ...	12·1	34·7	6	11	1	4
Fatehpur Síkri...	25·3	Do. ...	51·8	Do ...	6·6	45·2	5	12	1	4
Khairagarh ...	24·6	1873-74 ...	51·2	Do. ...	8·0	43·2	4	13	1	2
District ...	26·1	Do. ...	40·5	1877-78 ...	13·6	26·9	...	...	...	...

Statement showing the average annual rain-fall from 1862-63 to 1878-79.

Position of pargana.	Pargana.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	Average of 17 years.
N.	Itimádpur	27·1	31·0	19·7	24·4	22·9	40·8	19·6	26·0	20·8	29·4	24·4	38·1	37·7	32·9	32·3	16·4	18·8	2[illegible]·1
N.-E.	Firozabad	26·2	30·7	22·7	15·6	29·4	40·6	15·1	21·8	25·8	32·7	22·8	36·1	33·8	23·3	20·8	15·0	19·5	25·7
S. E.	Panáhat	24·2	28·7	22·4	21·8	23·9	36·1	18·6	33·5	26·1	28·0	27·8	33·4	30·1	26·0	21·9	13·8	17·9	25·5
E.	Fatehabad	31·5	28·6	21·2	15·7	26·3	34·0	9·7	21·3	18·1	24·6	17·5	26·6	33·8	27·7	25·8	12·4	22·2	23·4
Central.	Agra	22·1	30·1	21·4	17·0	26·6	32·2	20·3	31·0	28·9	37·8	24·7	46·3	33·5	31·0	27·2	10·3	16·1	26·8
S.	Irádatnagar	24·1	23·9	20·2	26·1	24·3	42·7	17·1	35·3	28·5	31·5	30·0	65·3	32·5	26·7	19·2	11·3	14·2	27·9
N.-W.	Farah	27·9	33·4	18·1	25·5	24·3	31·8	12·1	37·1	46·8	21·2	23·7	44·3	25·3	24·9	17·4	12·7	12·6	26·4
W.	Fatehpur Síkri	24·9	29·3	19·0	22·0	22·1	40·4	6·6	33·1	51·8	27·5	22·9	38·4	27·9	26·7	15·5	9·2	12·6	25·3
S.-W.	Khairagarh, ...	25·4	25·7	22·8	25·8	29·1	30·3	8·0	23·9	23·5	31·0	22·6	51·2	28·2	26·7	20·2	8·9	13·5	24·6
	Average of district	25·9	29·1	20·8	21·6	25·4	36·5	14·1	29·3	30·0	29·1	24·0	40·5	31·8	30·3	25·1	13·6	17·9	26·1

In this period of 17 years there were two years of abundant rain-fall, 1867-68 and 1873-74. That of the former date was more uniformly distributed over the district, there being a difference of about 12½ inches between the maximum fall in Irâdatnagar and the minimum fall which fell to the lot of Khairagarh, while in 1873-74 there was very great inequality in the distribution of the rain-fall. During this year (1873-74) there was the largest average fall throughout the district recorded since 1862, amounting to 40½ inches. There were two years of drought, 1868-69 and 1877-78, and that of 1878-79 was little better. The average annual fall for the whole 17 years was 26·1 inches, 40·5 being the maximum and 13·6 the minimum (in 1877-78); but taking the tahsíls as units, the maximum rose as high as 65·3 inches in Irádatnagar in 1873-74, and the minimum dropped to 8·9 inches in Khairagarh in 1877-78. In spite of the fact that, whether we examine the fall in each tahsíl for any given year, or the fall in each year for any given tahsíl, the limits of variation are very considerable, every part of the district seems in turn to get its share of rain. The smallest variation throughout the district in any given year was in 1868-69, when it amounted to only 6·6 inches, and for the whole period in any given tahsíl was in Panáhat, where it was 22·3 inches; nevertheless, there is only a difference of 4½ inches between the average annual rain-fall in Fatehabad, where it was smallest (23·4 inches), and Irádatnagar, where it was greatest (27·9). Irádatnagar and Itimádpur are the most fortunate parts of the district. In 11 out of 17 years one or other of these parganas received the maximum fall of the year. Panáhat, with fair annual average, is remarkable for enjoying the most regular rain-fall so essential to a tract so void of irrigation, while that of Irádatnagar varies between very wide limits. The Trans-Jumna parganas show a higher minimum than any of the Cis-Jumna parganas, a very important feature in the character of their rain-fall, and one which is of the greatest advantage to them, and, generally speaking, the northern and central portions of the district enjoy the more copious rain-fall, but the line cannot be rigidly laid down.

Tenures.

38. From the three statements on page 18 will appear the extent to which proprietary rights are held under the ordinary 'zemindari' and 'pattidari' tenures. Of these two the most usual is the latter, especially that form of it which is known as 'imperfect pattidari.' In this class is also included a large number of villages in which the tenure is generally called 'kabzadári' and sometimes 'bhaiachára.' Under this each sharer pays revenue in proportion to the area and quality of the land held by him separately, and any traces of fractional shares in the estates have long since disappeared. All the maháls in which the co-sharers are very numerous belong to this class. They generally have some lands common to the whole village, and are therefore included amongst the imperfect pattidari maháls. '*Perfect* pattidari' maháls are comparatively rare, and are not often met with except in Itimádpur and Firozabad. At present about one-third of the area of the district is held under a zemindari tenure, and this proportion tends to increase yearly as partitions are effected dividing what was a 'pattidari' mahál into two or more zemindari maháls. In Farah and Firozabad the proportion of zemindari lands is large, in the latter pargana owing to the area comprising the Kotla estate; next to them Fatehpur Sikri has the greatest proportion. Khairagarh and Panáhat on the other hand, with their large proprietary bodies, have comparatively few zemindari maháls.

39. Statements B. and C. (page 18) are drawn up in accordance with the new distribution of the parganas. The latter statement shows how great is the difference in the size of the maháls under the two tenures. Over the whole district the average size of a zemindari mahál is just 500 acres, while that of a pattidari mahál is 726 acres, nearly half as large again. The difference between the two is most striking in Itimád pur, Firozabad, Agra, and Khairagarh, in each of which parganas the zemindari mahál is but half the size of the other. The incidence of the revised revenue on the total areas of the two classes is also shown. It will be observed that, in every pargana except Firozabad, the incidence of the revenue on the zemindari maháls is *lower* than that assessed on the other class. It may be confidently asserted that, *cæteris paribus*, the

TENURE STATEMENTS.

A.—Proportion of zemindari and pattidari maháls under the former distribution of the parganas.

Pargana.	Zemindari.		Perfect pattidari.		Imperfect pattidari.		Total number of maháls.
	Number of maháls.	Per-cent. of total area.	Number of maháls.	Per-cent. of total area	Number of maháls.	Per-cent. of total area.	
Itimádpur	104	31	20	17	66	49	190
Firozabad	153	48	19	17	60	35	232
Panáhat	73	27	2	3	158	70	233
Fatehabad	74	36	11	7	74	57	159
Agra	129	39	6	2	87	59	222
Irádatnagar	53	36	7	5	82	59	142
Farah	109	51	...	...	92	49	201
Fatehpur Síkri	139	45	...	...	58	55	197
Khairagarh	41	18	4	6	82	76	127
District	875	34	69	8	759	58	1,703

B.—Under the present distribution of the parganas.

Pargana.	Zemindari.			Perfect pattidari.			Imperfect pattidari.			Total.	
	Number of maháls.	Area.	Per cent.	Number of maháls.	Area.	Per cent.	Number of maháls.	Area.	Per cent.	Number of maháls.	Area.
		Acres.			Acres.			Acres.			Acres.
Itimádpur ...	104	46,091	34	20	23,368	17	66	67,568	49	190	137,027
Firozabad ...	153	61,970	48	19	22,585	17	60	45,382	35	232	129,937
Panáhat ...	73	60,853	27	2	5,979	3	158	152,204	70	233	218,536
Fatehabad ...	91	56,823	37	17	11,246	7	99	86,529	56	207	154,598
Agra ...	139	54,265	41	10	13,298	10	92	66,005	49	241	133,568
Fatehpur Síkri,	158	70,982	41	18	9,753	6	108	93,436	53	284	174,171
Khairagarh ...	62	39,265	20	8	5,532	3	121	153,412	77	191	198,209
District ...	780	389,749	34	94	91,761	8	704	664,536	58	1,578	1,146,046

C.—The average areas and incidence of revenue in zemindari and pattidari maháls.

Pargana.	Zemindari maháls.		Pattidari maháls.		Total.	
	Average area.	Revenue rate.	Average area.	Revenue rate.	Average area	Revenue rate.
		Rs. a. p.		Rs. a. p.		Rs. a. p.
Itimádpur	443	1 1 9	1,053	1 9 7	721	1 9 0
Firozabad	405	1 12 0	860	1 11 0	569	1 11 10
Panáhat	827	1 0 0	989	1 3 3	852	1 1 7
Fatehabad	624	1 8 6	842	1 10 7	747	1 10 0
Agra	389	1 12 0	773	2 0 0	554	1 14 2
Fatehpur Síkri	449	1 11 5	724	1 12 5	613	1 12 0
Khairagarh	633	1 2 5	1,316	1 8 8	1,037	1 8 0
District	500	1 8 8	948	1 9 5	726	1 9 1

latter have been invariably assessed more leniently than the former; and it can only be concluded that the pattidari maháls still include the best portion of the district lands. It may also be mentioned that the result of the present revision has been to *lessen* the difference in the rate of the revenue assessed on the two classes of maháls:—

	Rs.	a.	p.	
The rate of the expiring revenue on the zemindari maháls was ...	1	5	3	per acre of total area.
Ditto ditto ditto pattidari	1	7	3	" " " "
a difference of 2 annas, or 11½ per. cent.				
The rate of the revised demand on the former is	1	8	8	" " "
Ditto ditto ditto latter	1	9	5	" " "
a difference of only 9 pie, less than 3 per cent.				

This gives evidence that at the present settlement full consideration was given to the difficulties under which large bodies of co-sharers labour, and the impolicy of assessing their revenues in the same way as in the case of single owners.

Revenue-free villages.

40. The revenue-free maháls are 69 in number, distributed over the different parganas as follows:—

	Maháls.
Pargana Itimádpur	2
" Panáhat	42
" Agra	13
" Irádatnagar	3
" Farah	2
" Fatehpur Síkri	5
" Khairagarh	2
Total ...	69

There are none in Firozabad or Fatehabad. Of these 69 maháls, there are 26 in which the muáfidars possess full proprietary rights, while in the remaining 43 they are only assignees of the Government revenue, proprietary rights being held by zemindars with whom settlement has been made in the ordinary fashion. To the former class belong the nine villages in Panáhat owned by the Rája of Bhadawar; Kolakha, Bodla, and the eight maháls of the Sawad-i-shahr in Agra; the two maháls of Jajau in Irádatnagar; the two maháls of Gadaiya Latifpur in Farah (now transferred to Muttra); Tajpur in Fatehpur Síkri, and Khankra and Sarai Ahmad in Khairagarh. The muáfidars are only assignees of the revenues in Anwalkhera and Usmanpur in pargana Itimádpur; in 33 maháls in Panáhat; in Akhola, Rohta, and Bodla Butat in Agra; in Birehru in Irádatnagar; and the four maháls of Bharkol in Fatehpur Síkri. The 33 maháls in Pináhat are of two classes. Eleven of them were old grants made by the then Rája of Bhadawar in favor of Brahmans, confirmed by Scindia and subsequently by the British Government: all but two of these were settled with zemindars at the last revision of settlement, and in the remaining two (Mansurpur and Nagla Ját) the proceedings of the present settlement have ended in a similar result. The other 22 maháls (forming 19 villages) are the jágir of the Rája of Bhadawar. Until 1853 no settlement had been made with the zemindars; but at the revision of that date proprietary rights were adjudged to the zemindars of these 22 maháls, and the Rája was declared to be merely the assignee of the revenue, the amount of which was accordingly fixed as for villages paying revenue to Government at two-thirds of the assets. A full account of the previous history of the family of the Rája and of the proceedings with regard to this jágir in 1853 is given in the late Mr. Smith's report on pargana Panáhat (pages 15-16). It is necessary to add a brief mention of the correspondence that has taken place on this matter since the submission of that report. In his letter No. 128, dated 22nd February, 1878, addressed to the Commissioner, Mr. Smith gave an account of the result of the proceedings of 1853, and pointed out that these proceedings, which were carried through during the minority of the present Rája, had resulted in a considerable diminution of the money value of the jágir as compared with the estimated value of it at the time of its confirmation by the Government of the North-Western Provinces on 27th August, 1840. The income

The jágir of the Rája of Bhadawar.

is now estimated at Rs. 44,641 as compared with Rs. 50,000, the estimated value in 1840. While Mr. Smith declined to re-open the question as to the correctness of Mr. Gubbins' decision in 1853, conferring zemindari rights on the proprietors in these 19 villages, he remarks in para. 15 of his letter :—" Without at all impugning the justice of Mr. Gubbins and the Board's decisions as between the parties, I cannot think that it was the intention of Government that the income of the Rája should be reduced by any action of its own. It seems to me that while it was just that the rights of both parties should be respected, it was and is equally just that no loss should devolve on the Rája." In the following para. (16) he explains in what way he would secure this result : " It appears to me, then, that the present state of things calls for remedial measures, and the matter can easily now be arranged by an approximate distribution of the rental assets in the zemindari villages. Of course in my assessment of the pargana, having no authority to deviate from the usual course, I have settled the estates at half assets. But Government have it in its power to divide these assets as it pleases, and its discretion, I think, might well be exercised in favor of the Rája in the present case." * * * " I would strongly recommend, then, that the assets be so distributed as to make up to the Rája the difference between his present income and the Rs. 50,000 originally conferred on him. In the Mainpuri villages, I believe, zemindari rights have never been conferred. The Mainpuri Settlement Officer's estimate of the assets in these villages and my own in the nine villages of Bah Panáhat could be taken as the actual assets accruing to the Rája, and the rest be made up from the zemindari villages by increasing the demand now fixed by an appropriate percentage. This percentage would not, I think, be high or oppressive. The zemindars would retain possession of all the rights conferred on them, and would probably still be paying a smaller proportion of the rental than the biswadars in the talúqdari villages of Mursáu in Aligarh."

The orders of the Government of India on this reference were communicated in letter No. 17R., dated 17th February, 1879, declining to take any action in the matter.

Population and caste distribution.

41. The statement on page 21 gives the numbers of the chief castes of which the population of this district is composed. The most important and almost the most numerous are the Brahmans, forming 15 per cent., and the Thakurs 11 per cent. of the total population. A great majority of the Brahmans are shown in the census returns as Kanaujiyas, with comparatively few Sanadh, Saraswat, and Gaur Brahmans ; but there is reason to believe that the numbers of the Kanaujiyas have been unduly exaggerated, and that a much larger number should have been showed as Sanadhs. This caste is relatively most numerous in Panáhat, where they own extensive proprietary rights : they are also numerous in Irádatnagar, where they include the class called Golapurabs.

42. Thakurs are found in large numbers in Irádatnagar, Khairagarh, Farah, and Panáhat, but there are very few of them in Agra and Fatehpur Síkri, in which parganas Játs take their place. In Irádatnagar they are of the Kachwaha, Indoliya, Sikarwar, and Dhakra classes, but no one class is of special importance. In Khairagarh, on the other hand, they are generally either Ponwars or Sikarwars ; the former living to the south-west of the Utanghan river, and the latter on the north-east side of that stream. There are also a few Chauhans and Tonwars. In Farah the Sikarwars are most numerous, and after them Chauhans and Jadons. In Panáhat the chief Thakurs are the Tonwars, inhabiting the tract of country near the Dholpur State, the Parihars forming the village communities north-east of the pargana, and the Bhadauriyas in the east. Baniyas form 5 per cent. of the population ; they are nearly always described as Agarwalas, and are equally distributed all over the district. The home of the Játs is in the western portion of the district, in the Fatehpur Síkri, Agra, and Farah parganas, where they formed the greater part of the old proprietary body. There are but few of them north of the Jumna, and none in the eastern parganas.

Statement showing the numbers of the chief castes and of the total population of the district in 1872.

Pargana.	Brahmin.	Thakur.	Baniya.	Ját.	Chamar.	Lodha.	Koli	Káchhi.	Gadaria.	Barhai.	Nai.	Kumhár	Kahár and Mallah.	Gújar.	Ahír.	Miscellaneous Hindus.	Total Hindus.	Musalmans.	Others.	Total population.
Itimádpur ...	13,744 (12)	13,139 (11)	3,893 (3)	8,066 (7)	24,986 (21)	2,203 (2)	2,224 (2)	3,382 (3)	8,381 (7)	2,756 (2)	2,665 (2)	1,499 (1)	2,613 (3)	18 (0)	5,416 (5)	14,051 (12)	110,736 (93)	8,512 (7)	21 (0)	119 270 (100)
Firozabad ...	13,075 (12)	8,548 (8)	4,522 (4)	1,048 (1)	19,328 (17)	2,813 (3)	2,949 (3)	4,680 (4)	4,532 (4)	2,649 (2)	2,710 (2)	1,763 (2)	7,019 (6)	2,089 (2)	11,402 (10)	13,327 (2)	102,454 (92)	8,577 (8)	... ...	111,031 (100)
Panáhat ...	33 383 (23)	18,737 (13)	7,942 (6)	91 (0)	17.152 (12)	2,067 (1)	5,049 (4)	8,000 (6)	4,209 (3)	2,568 (2)	3,103 (2)	6,119 (4)	3,712 (3)	2,623 (2)	5,951 (4)	16,969 (12)	137,675 (97)	4,480 (3)	... ...	142,155 (100)
Fatehabad ...	13,902 (16)	15.190 (17)	4,376 (5)	260 (0)	14,033 (16)	212 (0)	2,825 (3)	4,833 (6)	2,811 (3)	2,011 (2)	2,098 (2)	1,438 (2)	6,768 (7)	4,088 (5)	1,581 (2)	8.484 (9)	84,912 (95)	4,244 (5)	3 (0)	89,159 (100)
Agra ...	12,254 (11)	3,841 (3)	4,893 (4)	20,481 (18)	22,495 (20)	8,298 (7)	2,629 (2)	6,615 (6)	2,852 (3)	1,973 (2)	2,372 (2)	1,720 (2)	1,326 ( )	95 (0)	5,173 (4)	9,477 (8)	105,295 (93)	7,886 (7)	7 (0)	113,188 (100)
Irádatnagar ...	17,464 (19)	15,785 (18)	6,618 (7)	1,055 (1)	14,530 (16)	419 (1)	3,706 (4)	8,758 (9)	1,991 (2)	2,116 (2)	2,078 (2)	1,399 (1)	1,013 (1)	1,227 (1)	869 (1)	8,118 (9)	87,146 (93)	5,361 (7)	... ...	92,507 (100)
Farah ...	14,613 (15)	14,204 (14)	6,247 (6)	13,924 (14)	18,510 (19)	1,801 (2)	3,189 (3)	964 (1)	2,217 (2)	850 (1)	1,814 (2)	1,313 (1)	1,307 (1)	... (0)	1,299 (1)	7,078 (7)	89,330 (89)	11,167 (11)	1 (0)	100,498 (100)
Fatehpur Síkri ...	9,929 (12)	2,021 (3)	3,905 (5)	20,480 (24)	14,497 (17)	4,267 (5)	3,689 (4)	2 502 (3)	1,919 (2)	1,817 (2)	1,565 (2)	1 366 (1)	1.022 (1)	320 (1)	55 (0)	7,503 (9)	76,857 (91)	7,228 (9)	... ...	84,085 (100)
Khairagarh ...	14,570 (16)	13,384 (14)	6,385 (7)	4,772 (5)	15,291 (16)	1,910 (2)	4,011 (4)	7,090 (8)	1,537 (2)	2,258 (2)	1,678 (2)	1.288 (1)	274 (0)	3,676 (4)	1,139 (1)	7,974 (9)	87,167 (93)	6,116 (7)	.. ...	93,283 (100)
Total without city,	1,42 934 (15)	1,03,849 (11)	48,583 (5)	70,177 (8)	160,753 (17)	23,990 (2)	39,971 (3)	46,824 (5)	30 449 (3)	18,998 (2)	20,083 (2)	17,905 (2)	26,054 (3)	14.136 (2)	32,885 (3)	92,981 (10)	881,572 (93)	63,571 (7)	33 (0)	945,176 (100)
Agra city and cantonment.	11,586 (8)	7,107 (5)	14,952 (10)	761 (0)	16,222 (11)	1,859 (1)	7,883 (5)	4,779 (3)	5,875 (4)	1,616 (1)	2,046 (1)	2,381 (2)	2,891 (2)	177 (1)	2,268 (2)	21,518 (14)	103,921 (69)	43,558 (30)	1,529 (1)	149,008 (100)
Grand Total ...	154,520 (14)	110,956 (10)	63,535 (6)	70,938 (7)	176,975 (16)	25,849 (2)	38,854 (3)	51,603 (5)	36,324 (3)	20,614 (2)	22,129 (2)	20,286 (2)	28,945 (3)	14,313 (1)	35,153 (3)	114,499 (11)	985,493 (90)	107,129 (10)	1,562 (0)	1,094,184 (100)

Note.—The figures within brackets denote percentages.

43. Chamars, though not the most influential, are considerably the most numerous caste, and include no less than 17 per cent. of the total population. As might be expected, they are in the greatest numbers in the Agra pargana and those adjacent to it, Farah and Itimádpur. The only other minor castes of any importance are the Káchhis, Kolis, Gadariyas, including each some 2 or 3 per cent of the population. Musalmans, who are relatively most numerous in Farah and least numerous in Panáhat, comprise 7 per cent.

44. None of these call for any special notice. There is however in Panáhat "a curious class repudiated by all true Thakurs, the members of which call themselves, and are called by others, Rájputs, but never Thakurs, who never intermarry or have any social communication with real Rájputs. There are numerous sub-divisions of this class, and they are as much a separate caste as Brahmans or Baniyas. They abound in certain parts of Dholpur also, and are known in one or two of the adjoining parganas of this district."

45. The above remarks apply, strictly speaking, to the population of the district, exclusive of that portion residing within the limits of the city and cantonments of Agra. If the latter be also included, the chief change that arises is, that, while the percentage of Brahmans and Thakurs falls, that of Baniyas and Musalmans rises. The proportion of the former in the city is double what it is elsewhere, while Musalmans are more than four times as numerous. Amongst the minor castes it may be noted that the place of Chamars in the country is to some extent taken by Kolis in the town.

46. The total population of the district was, in 1872, 1,094,184 persons. Of these 535,462 were returned as agriculturists, 49 per cent. of the total, while the remaining 51 per cent., 558,722 in all, were non-agriculturists. The numbers of the latter class are, of course, much swelled by the inhabitants of the city of Agra. In the outlying parganas agriculturists form the majority, ranging from 54 per cent., their proportion in Irádatnagar and Fatehpur Síkri, to as high as 70 per cent. in Panáhat. Across the Jumna they are slightly in the minority. Full statistics are given in the statements on page 23, from which may also be gathered some information as to the relation of the area of cultivation to the population it has to support and the condition of the people.

Condition of the people: (1) Ratio of cultivated land to population.

47. To every head of the total population there is an average cultivated area of 0·77, or about three-quarters of an acre. In most parganas the ratio rises to nearly one acre, but the district average is pulled down by the large population of the city. The amount of cultivated land per head of the agricultural portion of the inhabitants, not being affected by that abnormal item, is very uniform; the minimum is found in Panáhat, where it is only 1¼ acre, and the maximum in Itimádpur and Fatehpur Síkri, where it is 1¾ acre, the usual amount being 1⅔ acre, which is also the district average. The average size of the cultivated holdings is 8 acres; but the variations are very great, for while it is as large as 13 acres in Itimádpur, it is only 5½ acres in Khairagarh. The difference seems to arise chiefly from some variety in the customs of the two localities, for we have seen that there is no great difference between the area per head of the agricultural population, so that the holding in Itimádpur, though it seems very large, has to support nearly eight persons, while the small holdings of Khairagarh have to maintain only between three and four persons on an average. There is therefore no such serious difference in the condition of the people as might be suspected from a consideration of the relative size of the holdings.

(2) Density of the population.

48. The ratio of the population to the total area will be discussed later on (see page 76). Its density as compared with the culturable and cultivated areas is a matter so closely connected with that which was the subject of the last para. that it may be mentioned in the same connection. Excluding the abnormal pargana of Agra, Firozabad is remarkable as having the thickest population both in proportion to its culturable and cultivated area, while Khairagarh stands at the other end

Statistics of population.

Pargana.	Population in 1865.	Population in 1872. Total.	Agricultural. Number.	Agricultural. Per cent.	Non-agricultural. Number.	Non-agricultural. Per cent.	Cultivated land per head of agriculturists.	Cultivated land per head of total population.	Average size of holdings.	Number of persons supported by each holding.	Number of persons per square mile. Cultivated.	Culturable.	Of total area
Itimádpur	109,041	119,270	57,363	48	61,907	52	1·75	0·84	13·0	7·6	760	67·	552
Firozabad	99,995	111,031	54,755	49	56,276	51	1·66	0·82	9·38	5·7	782	711	547
Panáhat	133,903	142,155	98,956	70	43,199	30	1·21	0·84	6·38	5·3	756	655	449
Fatehabad	83,239	89,159	53,333	60	35,826	40	1·67	1·0	8·46	5·0	641	557	432
Agra	253,294	262,196	56,794	22	205,402	78	1·5	0·41	6·87	4·6	1,914	1,491	1,410
Irádatnagar	89,684	92,507	49,848	54	42,659	46	1·6	0·57	8·0	5·0	740	638	564
Farah	9[illegible],870	100,498	59,295	59	4[illegible],203	41	1·6	0·99	7·7	5·0	648	555	502
Fatehpur Síkri	76,215	84,085	45,326	54	38,759	46	1·8	0·98	7·2	4·0	647	539	506
Khairagarh	89,318	93,283	59,792	65	33,491	35	1·6	0·95	5·6	3·5	666	488	4·9
District	1,026,559	1,094,184	535,462	49	558,722	51	1·6	0·77	8·0	5·0	833	712	550

Statement showing the details of population, houses, ploughs, and plough-cattle, &c.

	Pargana.	Population in 1865. Agriculturists.	Non-agriculturist.	Total.	Population in 1872. Agriculturists.	Non-agriculturists.	Total.	Houses. Pucka.	Kucha.	Thatched.	Total.	Ploughs.	Plough-cattle.	Other cattle.	Sheep and goats.
Old Parganas.	Itimádpur	50,961	58,080	109,041	57,363	61,907	119,270	1,286	14,822	5,327	21,435	8,254	17,468	28,252	11,659
	Firozabad	47,801	52,194	99,995	54,755	56,276	111,031	762	14,198	8,144	23,104	8,848	19,034	17,335	9,010
	Panáhat	102,940	30,963	133,903	98,956	43,199	142,155	1,180	23,267	3,459	27,906	12,965	25,370	34,064	17,400
	Fatehabad	54,445	28,794	83,239	53,333	35,826	89,159	114	13,823	3,629	17,566	7,935	16,164	27,924	10,853
	Agra	57,779	195,515	253,294	56,794	205,402	262,196	71,861	48,766	14,808	135,435	7,256	14,848	28,191	8,604
	Irádatnagar	55,479	34,205	89,684	49,848	42,659	92,507	217	16,319	2,270	18,8[illegible]6	7,179	14,109	25,748	14,637
	Farah	60,936	30,934	91,870	59,295	41,203	100,498	674	17,266	2,098	20,038	6,112	18,499	36,487	10,956
	Fatehpur Sikri	55,757	20,458	76,215	45,326	38,759	84,085	2,615	12,195	3,475	18,285	6,997	14,306	26,369	7,282
	Khairagarh	76,537	12,781	89,318	59,792	33,491	93,283	2,185	10,675	5,570	18,430	7,313	15,078	33,036	12,087
	Total ...	562,635	463,924	1,026,559	535,462	558,722	1,094,184	80,894	171,331	48,7[illegible]0	301,005	72,859	154,8[illegible]8	257,406	102,488
New Parganas.	Itimádpur	50,961	58,080	109,041	57,363	61,907	119,270	1,286	14,822	5,327	21,435	8,254	17,468	28,252	11,659
	Firozabad	47,801	52,194	99,995	54,755	56,276	111,031	762	14,198	8,144	23,144	8,848	19,034	17,335	9,010
	Panáhat	102,940	30,963	133,903	98,956	43,199	142,155	1,180	23,267	3,459	27,906	12,965	25,370	34,064	17,400
	Fatehbad	69,272	39,049	108,321	65,838	50,111	115,949	113	19,566	4,034	23,713	9,794	19,920	35,601	17,458
	Agra	64,038	198,677	259,715	59,954	208,671	268,625	71,88[illegible]	49,288	15,501	13,6677	7,791	16,064	31,000	10,248
	Fatehpur Sikri	86,592	39,426	125,978	77,890	59,131	137,021	2,729	21,133	4,734	28,596	9,815	25,605	44,476	13,371
	Khairagarh	109,560	30,060	139,596	89,156	55,170	144,326	2,375	19,027	6,843	28,045	11,440	22,884	45,777	18,900
	Total ...	528,124	448,425	976,549	503,912	534,465	1,038,377	80,333	161,301	47,842	289,476	68,907	145,345	236,505	98,046
	Villages transferred to Muttra ...	34,511	15,499	50,010	31,550	24,257	55,807	561	10,030	938	11,529	3,952	8,533	20,901	4,442

of the scale, especially in the ratio of the population to its culturable area. As far as regards the cultivated area only, there is little difference in its proportion to the numbers of the inhabitants in the four parganas Fatehabad, Farah, Fatehpur Síkri, and Khairagarh. Next to them come Irádatnagar, Panáhat, and Itimádpur. Over the whole district there are 833 persons to each square mile of cultivated land, 712 persons to each culturable square mile, and 550 to each square mile of the total area.

(3) Houses.

49. For the total population of 1,094,184 persons there are 297,205 houses, an average of one house to every three or four persons: but if we omit the Agra pargana (which includes the city), the average number of inhabitants to a house is just five. The returns for the Agra pargana would give only two persons to each house, the correctness of which is open to doubt. Of these houses 27 per cent. are masonry, 56 per cent. are of earth, and 17 per cent. are thatched houses. Here also the inclusion of the city gives a false idea of the general character of the houses of the district. Excluding the Agra pargana, the proportion of masonry houses falls below 6 per cent., earthen houses include 73 per cent., and thatched houses the remaining 21 per cent. Masonry houses are comparatively most numerous in Fatehpur Síkri and Khairagarh, owing to the supply of stone available in those parganas.

(4) Ploughs and plough-cattle.

50. There are 72,859 ploughs returned as working the 840,158 acres of cultivated land in this district, giving an area of 11½ acres to each plough. In Firozabad and Panáhat the plough area is 10 acres, in Fatehabad, Irádatnagar, and Khairagarh it is 11 acres, and 12 acres in Itimádpur, Agra, and Fatehpur Síkri. So far there is little variation; but in Farah the statistics give an area of 16 acres to each plough, which is so much above the average elsewhere that it leads to the suspicion that the number of ploughs have been under-estimated. It may be observed also that while in every other pargana the number of plough-cattle gives just two head of cattle to each plough, in Farah there are 18,496 cattle to the 6,112 ploughs, or three head of cattle to each plough. As far as the plough-cattle alone are concerned, there is little difference in the various parganas, all alike having about two head of cattle to work 11 acres of land.

Indebtedness of the cultivators.

51. The only definite statistics obtained with regard to the extent to which the body of tenants are in debt are given in the following statement. Lists were made out by the patwáris of the number of tenants in each village known to be out of debt, and the number who work on borrowed capital. The result for the five parganas in which the inquiry was carried is here shown :—

Pargana.	Tenants in debt.		Tenants out of debt.		Total.
	Number.	Per cent.	Number.	Per cent.	
Itimádpur	5,826	75	1,874	25	7,700
Firozabad	5,697	75	1,950	25	7,647
Agra	8,543	74	3,046	26	11,589
Farah	11,341	82	2,507	18	13,848
Fatehpur Síkri	11,204	80	2,803	20	14,007
Total ...	42,611	78	12,180	22	54,791

It is clear, then, that at least three-fourths of the tenants are in debt to the village money-lender. Those living across the Jumna seem to be somewhat better off than their fellows in the rest of the district, as might be expected for other reasons (see page 59): but, after all, there is no great difference. The following remarks, which I quote from Mr. Smith's report on pargana Itimádpur (page 12), give a good account of the condition of the cultivators: "No doubt the great majority of cultivators are in debt to the village Sonkar. But this has been the general condition of the cultivators from time immemorial. It is only the few who will accumulate. The

multitude, if they are well-housed and clothed and have enough to live on and marry their children, are content to remain in debt all their lives. It does not by any means follow that their condition is a wretched one. When free from rackrenting, with only an occasional bad season and the prices of the last ten or fifteen years prevailing, they can draw on their banker without hindrance for all ordinary wants and even occasional luxuries. This is the position of the great bulk of the cultivators here, and if not an altogether satisfactory one, it does not entail much anxiety or discomfort. It is difficult to say as much of the mere 'mazdurs' or unskilled laborers. These classes have their opportunity in and about Agra, where railways, canals, and other works offer fair wages. Those members of the family who care to seek for work can mostly obtain it not far off on good pay. Those who are left in the villages are certainly very poor; their work is almost wholly agricultural, and they are chiefly paid in kind, getting just about enough to eat and the scantiest clothing."

52. Mr. Benson in his Firozabad report writes to much the same effect:—"The general indebtedness of the cultivator is a subject much dwelt on. In this pargana only 25 per cent. of the lands are farmed by farmers working with their own capital. It is impossible to farm without capital: the holders of capital are not by profession agriculturists, and neither custom, capacity, nor inclination warrants their undertaking farming on their own account through the medium of hired labor. *Per contra*, there is a large class by habit and education agriculturists, ready to undertake the tillage of the soil, but lacking the necessary capital. Hence the vast extent of farming carried on by borrowed capital. As the farmers are all small men and can offer nothing but personal security, they have to pay an exorbitant rate of interest .....that it is the want of security that causes the high rate of interest is strikingly exemplified by the fact that if a tenant takes an advance of cash to pay his rent when the crops are ripe, he pays one anna per rupee, per mensem as interest, or 75 per cent. per annum. This is double the ordinary rate, half an anna in the rupee, which in itself seems high enough.....Nevertheless, I do not think that the cultivators are on the whole in a bad condition, or that a family of six persons, of whom two at least are minors, are badly supported on a holding of ten acres, for which they pay, say, Rs. 50 per annum. Extreme cases of rackrenting show that it is possible for them to pay Rs. 70 or 80, and yet carry on; so that they cannot be held to be in miserable circumstances."

53. But their condition is less satisfactory in the cis-Jumna parganas. In Fatehabad "only 11 per cent. of the cultivating body are found to be clear of the village banker's books, and 89 per cent. are in debt. One reason appears to be that in Fatehabad the village bankers are also proprietors in much larger numbers than is elsewhere the case. These men have the cultivators more completely in their toils than would be possible if they were unconnected with the land." In the Agra pargana there is a considerable contrast between the condition of the agricultural and the non-agricultural population. In his assessment report Mr. Benson writes: "A great mass of the village population have been returned as non-agriculturists who are closely allied to the agricultural population, but whom the neighbourhood of a great city supplies with work and a means of livelihood. The canal and railway works have called for a great deal of labor of late years, and to a certain extent public works must be always going on. The present condition of this large section of community is fairly prosperous: they can never be very well off, and have little but rags to cover them and enough grain to keep them from starvation: but this they have. In the end, however, they must come back on the soil, and, I imagine, any local distress, any 'famine of labor,' let alone a 'famine of food,' would be severely felt. Of the population living by agricultural pursuits the condition is better, and in many cases they show a good deal of prosperity." The events of the last few years have shown the truth of these remarks with regard to the non-agricultural portion of the population.

Proprietary classes.

54. The distribution of proprietary rights amongst the different castes in this district is shown for the old parganas in Part II., page 41. I have in that place discussed the position of the various castes, both past and present, and it is unnecessary to anticipate those remarks here. The statement here given (page 27) has been drawn up for the sake of future reference in accordance with the new arrangement of the parganas, and for the existing area of the district, exclusive only of the villages recently added to Itimádpur from the old pargana of Jalesar. There is, however, one point brought out by this statement, to which no allusion is made later on, *viz.*, the average area held by each proprietor. The total area of 1,145,998 acres is divided amongst 43,551 recorded proprietors, giving an average of a little over 26 acres to each person. If we look to the comparative size of these holdings in the different parganas, the first point that strikes us is their largeness in the Trans-Jumna parganas as compared with the rest of the district; and secondly, that as in many other respects, so also in the smallness of their proprietors' estates do Panáhat and Khairagarh resemble one another, and differ from the other parganas. To the large estate of Kotla in Firozabad is due the large average of 64 acres; but even independently of that, the estates in that pargana, as in Itimádpur, are much larger than elsewhere. It must be mentioned also that these figures understate the area of an average zemindar's estate for two reasons. In the first place, wherever a zemindar holds in one or more villages, or maháls, or even pattis, he is reckoned as many times as his name appears in the records. In the second place amongst the proprietors are included all the owners of small patches of land, whether paying revenue or not: they were rightly so included, but it has the effect of misleading the reader as to the average size of an ordinary zemindar's holding. In the statement given below for Itimádpur and Firozabad, which was drawn up for another purpose, no zemindar is reckoned twice over, and the number of proprietors there shown accurately represents the number of holdings in the pargana. Thus, instead of 3,700, there are actually only 3,070 zemindars in Itimádpur, and 1,513 instead of 1,944 in Firozabad; so that the average extent of a zemindar's estate in the former is 46, not 37 acres, and in the latter 84, not 64 acres. Making a proportionate allowance for similar errors in the number of proprietors elsewhere, we may take the average for the district to be about 33 acres instead of 26, and similarly for the other parganas, it would be in Panáhat and Khairagarh 27 acres, in Agra 25 acres, in Fatehpur Síkri 30 acres, and in Fatehabad 47 acres.

Average extent of estates.

Pargana.	Average area held by each proprietor.
	Acres
Itimádpur	37
Firozabad	64
Panáhat	21
Fatehabad	32
Agra	22
Fatehpur Síkri	24
Khairagarh	21
District	26

Relative extent of large and small proprietors.

55. The statement to which I have just alluded is given below. Its object was to ascertain to what relative extent large and small holdings prevailed. Its compilation was both laborious and costly, and I was obliged to abandon its preparation after its completion for two parganas. It will be seen that in both parganas an immense majority of the zemindars pay less than

Paying revenue.	*Itimádpur.*		*Firozabad.*	
	Number of proprietors.	Revenue.	Number of proprietors.	Revenue.
		Rs.		Rs.
From Rs. 1 to Rs. 100	2,750	60,803	1,223	28,047
" " 100 " " 200	164	22,587	117	16,746
" " 200 " " 500	101	31,913	103	33,835
" " 500 " " 750	23	13 374	30	17,655
" " 750 " " 1,000	12	12,029	19	16,957
" " 1,000 " " 2,000	10	16,653	13	19,107
" " 2,000 " " 5,000	7	30,998	4	10,292
" " 5,000 " " 10,000	2	13,788	2	15,342
" " 10,000 " " 25,000	1	17,055	1	15,408
" " 50,000 " " 1,00,000	...	...	1	50,871
Total ...	3,070	2,13,200	1,513	2,24,260

Statement showing the extent to which proprietary rights are held by the different castes.

Number.	Caste.	Itimádpur.		Firozabad.		Panáhat.		Fatehabad.		Agra.		Fatehpur Síkri.		Khairagarh.		District.	
		Number.	Area	Number.	Area.	Number.	Area.	Number.	Area.	Number.	Area.	Number.	Area.	Number.	Area.	Number.	Area.
			Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.
1	Thakur ...	1,778	51,705	468	53,499	3,021	70,628	1,856	41,389	997	12,153	880	23,473	3,728	84,516	12,728	337,363
2	Brahman ...	572	35,145	333	23,538	4,755	81,681	1,291	28,723	1,338	28,834	1,242	30,708	2,019	26,972	11,580	255,601
3	Játt ...	811	21,446	20	4 933	1	1	54	1,895	1,767	18,162	3,720	42,288	822	13,049	7,195	101.774
4	Bania ...	142	6,992	66	2,288	509	15,718	329	18,772	377	11,597	307	9,200	546	12,465	2,276	77,032
5	Khattri ...	5	5,054	...	...	11	14,741	29	11,532	58	12,061	36	16,133	21	10,151	160	69,642
6	Káyath ...	48	1,699	116	8,915	127	3,226	97	5,707	152	14,797	226	25,636	110	9,318	876	66,300
7	Gújar ...	...	...	80	18,758	287	4,713	395	24,931	7	11	161	434	8,388	1,210	56,958
8	Ahír ...	153	3,062	519	8,823	300	7,417	51	876	399	9,537	26	447	18	541	1,466	30.703
9	Golapurab ...	26	511	...	...	342	3,822	77	1,585	...	...	...	...	850	23,597	1,295	29,515
10	Rájput ...	...	...	...	...	564	10,293	310	6,438	3	1,651	...	...	...	...	877	18,382
11	Lodha ...	3	30	...	...	16	137	...	...	238	3,517	206	2,593	41	396	504	6,673
12	Kurmi ...	25	2,240	...	...	...	...	...	...	38	1,994	12	669	...	...	75	4,903
13	Goshain ...	1	162	3	113	20	147	41	2,146	24	193	5	470	37	347	131	3.578
14	Bairagi ...	2	112	...	...	28	784	20	45	38	313	56	1,474	37	834	181	3.562
15	Kahár and Mallah...	37	335	2	47	45	1,252	29	959	34	856	1	7	...	...	148	3.456
16	Kachhi ...	37	233	1	2	53	122	7	12	42	451	1	16	21	620	162	1,456
17	Kalál ...	...	...	...	...	...	...	...	...	1	1	...	...	187	1,098	188	1,099
18	Musalman ...	31	6,827	329	8,609	113	769	154	8,333	406	11,948	247	16,041	190	4,774	1,470	57,301
19	Malkana ...	17	577	...	...	...	...	52	442	31	671	297	2,815	75	654	479	5,159
20	Miscellaneous ...	12	1,117	7	414	242	3,156	31	757	85	7,081	44	2,003	129	993	550	15,521
	Total	3,700	137,247	1,944	129,939	10,464	218,609	4,823	154,542	6,038	132,814	7,317	174,134	9,265	198,713	43,551	1,145,398

NOTE.—This statement is drawn up for the parganas as arranged under the recent distribution. The statement given later on in Part II. page 41, gives similar information for the old parganas.

Rs. 100 as revenue, and that in Itimádpur these small proprietors as a class pay more revenue than any other of the classes into which the zemindari body has been subdivided. If we extend the limit to all proprietors paying less than Rs. 500, it will include 3,015 out of 3,070 in Itimádpur, and 1,443 out of 1,513 in Firozabad, showing clearly how much the revenue is made up of a large number of minute contributions from small estates. There is no doubt that, were similar statistics available for the rest of the district, they would show even a larger proportion of these small proprietors than in these two parganas.

Cultivating classes: Relative importance of the different castes.

56. The statement on page 29 shows the extent of land cultivated by each of the chief classes, whether proprietors or tenants. A comparison of this statement with that already given on page 21 will indicate what classes and castes are of the greatest importance as cultivators, both actually and relatively. First and foremost come the Thakurs, who cultivate more than one-fifth of the total area, though they form but one-tenth of the population: so that while the extent of their cultivation is actually larger that of any other individual class, it is also very much greater in relation to their numbers. They hold most extensively in Irádatnagar, and in all other parganas except Agra and Fatehpur Síkri, where their place is taken by the Játs. Brahmans, the next largest cultivators, also hold more than the proportion of their numbers would warrant in every pargana: the extent of their holdings in Panáhat is specially remarkable. After them come the Játs, who cultivate 14 per cent. of the area, though only forming seven per cent of the population: they hold very largely in Agra, Fatehpur Síkri, and Farah. These are the three chief cultivating classes. Amongst the others the Chamars cultivate the most land, but the difference between them and the castes mentioned above lies in this, that though they form 16 per cent. of the population, they cultivate only seven per cent. of the land, the reverse of the position of the Thakurs and Játs. Káchhis cultivate barely 4 per cent., more indeed in Irádatnagar and Khairagarh than elsewhere, and least of all in Farah; but in this district they are nowhere of any importance. Ahírs cultivate a good deal of land in Firozabad and to a less extent in Itimádpur, but on this side of the Jumna they generally hold but little. Golapurabs are practically confined to Irádatnagar and Farah. Mallahs cultivate along the banks of the Jumna, and are therefore not met with in Fatehpur Síkri and Khairagarh. Gújars are only of importance in Fatehabad and Khairagarh. Malkanas cultivate a good deal in Farah, but little anywhere else. Kirars are confined to Khairagarh.

Rent-rates.

57. There is no universally recognized custom under which certain classes pay lower rates than others. Undoubtedly the average rate paid by Thakurs falls below that paid by other tenants; but this I believe to arise chiefly from the fact, that they are in so many cases relatives of zemindars under whom they hold, or are ex-proprietors now cultivating what was their sír as tenants of the purchasers who have been content to let them hold on their old sír rates. It is also, no doubt the case that in a village cultivated chiefly by Thakurs rates will run lower than in one cultivated (say) by Játs. But when cultivators of the two classes hold under the same circumstances, neither being favored by any privilege of relationship, there seems to be no tendency to allow the Thakurs, simply as Thakurs, to hold at privileged rates. The only class that does appear always to pay high rates is the Káchhis, who, except in Khairagarh, pay higher, and a good deal higher, than any others; but it must be remembered they generally confine themselves to the better classes of land. Nor are there any signs of any such distinction with regard to any other castes. For instance, Golapurabs, who pay higher than any one else in Panáhat, pay little more than the Thakurs in Irádatnagar. Káyaths who pay, generally, very low rates, pay the highest average rate in Farah. Brahmans in most parganas pay about the average, oftener than not rather below it: yet in Fatehabad, where they hold very largely, they pay higher than any except Káchhis and Gadariyas. Baniyas generally pay above the pargana average; Chamars nearly always. Mallahs pay low rates, but this is because the lands they cultivate are of the poorest description.

Statement showing (A) actual area cultivated by each class of cultivator.
(B) percentage of total cultivated area ,, ,,
(C) the rent rate paid ,, ,,

Class of cultivator.	Itimádpur.			Firozabad			Panáhat.			Fatehabad.			Agra.			Irádatnagar.			Farah.			Fatehpur Síkri.			Khairagarh.			District.	
	A	B.	C.	A.	B.	C.	A.	B.	C.	A.	B.	C.	A.	B.	C.	A.	B	C.	A.	B.	C.	A.	B.	C.	A.	B.	C.	A.	B.
			Rs. a. p			Rs. a. p			Rs. a. p.			Rs. a. p.			Rs. a. p.			Rs. a. p.			Rs. a. p			Rs. a. p.				
Brahman ...	17,506	18	3 8 0	16,792	19	3 3 0	36,382	30	3 8 5	18,471	21	3 10 0	14,806	17	3 13 8	11,580	14	3 14 7	17,236	17	2 14 9	14,282	17	3 12 9	18,063	20	3 3 0	1,65,118	19·6
Golapurab ...	...	.	...	...	...	...	2,589	2	4 10 2	540	...	4 2 0	377	...	3 8 6	9,894	13	4 6 9	402	½	2 14 5	158	...	4 6 3	406	1	3 12 8	14,366	1·7
Thakur ...	26,912	28	3 3 4	17,889	20	4 8 0	24,619	21	3 6 3	25,921	29	3 9 3	5,184	6	4 7 4	32,740	41	4 5 1	24,939	25	2 15 2	4,250	5	3 12 2	29,948	34	3 8 0	1,82,403	21·6
Baniya ...	1,576	2	3 3 0	852	1	4 7 7	2,826	3	4 2 7	2,230	3	3 9 10	2,572	3	4 0 1	3,482	4	4 9 5	2,432	3	3 0 4	1,912	2	4 5 1	2,720	3	3 9 0	20,723	2·4
Káyath ...	1,066	1	3 1 9	1,391	1	3 9 11	1,627	1	3 3 11	1,159	1	3 6 3	821	1	4 0 6	671	1	3 9 7	401	½	3 9 9	1,983	2	3 4 7	590	1	3 6 0	9,709	1·2
Játs ...	13,753	14	4 1 0	2,008	2	3 13 1	525	...	4 6 7	498	...	4 0 0	31,654	36	3 15 6	2,467	3	3 4 6	23,704	24	3 3 5	38,500	47	4 1 1	7,376	8	5 0 0	1,20,485	14·2
Gújar ...	103	...	...	4,126	5	3 15 8	3,078	3	3 3 1	7,834	9	3 5 5	40	...	...	2,038	3	3 6 8	1,291	1	2 12 10	455	...	3 13 10	5,417	6	2 12 0	24,432	3·0
Chamar ...	10,475	10	4 0 9	10,175	11	4 12 0	8,775	8	4 0 7	6,032	7	3 6 8	5,896	7	4 5 4	3,704	5	4 10 10	4,539	5	3 8 2	4,919	6	3 12 9	5,771	6	4 0 0	60,286	7·1
Lodha ...	1,815	2	3 1 3	2,560	3	4 2 3	1,763	1	2 10 6	397	...	3 0 0	7,445	9	4 12 1	292	...	4 5 7	3,079	3	3 7 2	4,073	5	4 9 11	2,056	2	4 0 0	23,486	2·8
Ahír ...	7,254	7	3 2 9	13,908	15	3 9 6	5,785	5	3 11 13	1,975	2	3 10 2	6,164	7	3 4 8	966	1	3 6 6	1,600	2	3 6 6	51	...	3 11 8	242	...	4 7 4	37,945	4·4
Mallah ...	5,238	5	2 1 6	7,293	8	2 3 6	6,376	5	2 10 6	7,924	9	2 2 5	891	1	2 11 8	263	...	2 5 2	282	...	2 6 1	...	...	...	...	...	...	28,267	3·3
Kachhi ...	2,383	2	4 8 0	3,951	4	5 9 9	4,787	4	4 1 8	3,829	4	4 4 8	2,973	3	5 6 1	5,455	7	4 12 4	483	½	3 0 0	2,117	3	4 5 1	6,420	7	3 12 8	32,398	3·8
Gadariya ...	6,202	6	3 10 5	3,150	3	4 4 0	3,345	3	4 0 7	2,398	3	4 0 7	1,060	1	4 7 1	897	1	4 0 0	663	½	3 2 9	675	1	4 2 4	653	1	4 4 0	19,043	2·2
Rájput ...	...	.	...	...	...	...	3,917	3	3 13 11	3,044	3	3 13 11	104	...	4 7 4	195	...	3 0 0	4,175	4	3 8 1	...	...	...	...	...	...	11,433	1·4
Kirar ...	...	...	...	...	...	...	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	2,047	3	5 0 0	2,047	0·2
Malkana ...	45	...	...	...	...	...	13	..	...	711	1	3 1 2	1,237	1	4 11 3	1,150	1	4 0 5	6,170	6	3 1 1	2	...	...	704	1	3 15 3	10,032	1·2
Musalman ...	1,659	1	2 15 3	2,016	2	3 6 6	491	...	3 0 0	1,310	1	4 5 2	2,255	3	4 3 4	733	1	4 3 0	2,102	2	2 15 0	1,525	2	3 0 0	1,087	1	2 6 7	13,178	1·5
Miscellaneous...	4,232	4	...	4,602	5	...	13,270	11		4,830	6	...	4,105	5	...	3,945	5	...	6,179	6	...	8,003	10	...	5,641	6	...	64,807	8·4
Total ...	1,01,219	×	3 7 6	90,719	×	4 2 2	1,20,168	×	3 10 0	8[illegible],213	×	3 7 5	87,585	×	4 1 0	80,470	×	4 4 0	99,737	×	3 1 0	82,906	×	3 12 7	89,141	×	3 8 9	8,40,158	100

Villages and hamlets.

58. The total number of villages in the district is 1,281, in addition to which these are 1,886 hamlets; so that there are altogether 3,167 inhabited sites. There is thus an average area of 947 acres to each main village, and 386 acres to each inhabited site. There is a considerable difference between the different parganas in this respect. In Firozabad, for instance, the average area to each main village is only 684 acres, while it is 1,350 acres, nearly twice as much, in Khairagarh. In some parganas also the population is much more concentrated in the main villages; in others it is scattered over comparatively numerous hamlets. In Farah and Fatehpur Síkri the number of hamlets is very small, being less than one to each main village: in Fatehabad, on the other hand, there are nearly three hamlets on an average to each main site. So that while in Farah, there are 567 acres to each site, in Fatehabad there are only 263 acres. Generally speaking, in the outlying parganas, Panáhat, Khairagarh, Fatehpur Síkri, and Farah, there are fewer hamlets than in the other parganas situated nearer Agra.

Statistics of villages and hamlets.

	Main villages.	Hamlets.	Total inhabited sites.	Average area in acres	
				Per village.	Per site
Old parganas.					
Itimádpur	136	331	467	1,006	293
Firozabad	190	197	387	684	336
Panáhat	213	259	472	1,026	463
Fatehabad	128	373	501	1,032	263
Agra	137	142	279	861	314
Irádatnagar	128	165	293	818	357
Farah	136	90	226	935	567
Fatehpur Síkri	110	100	210	966	506
Khairagarh	103	229	332	1,350	419
District ...	1,281	1,886	3,167	947	386
New parganas.					
Itimádpur	136	331	467	1,006	293
Firozabad	190	197	387	684	336
Panáhat	213	259	472	1,026	463
Fatehabad	179	390	569	864	272
Agra	147	193	340	908	393
Fatehpur Síkri	173	149	322	1,006	541
Khairagarh	159	324	483	1,247	410
District ...	1,197	1,843	3,040	957	377
Transferred to Muttra	84	43	12	808	535
Total ...	1,281	1,886	3,167	947	386

PART II.

FISCAL HISTORY.

Early settlements.

The first regular settlement.

59. For two years after the conquest of the country of which this district formed part summary settlements were made. The first regular settlement was not effected till the third year, 1806 A.D. (1213 fasli). Of the proceedings at that date nothing more is known than the amount of the revenue demand, and that with considerable uncertainty. Information with regard to the revenues assessed at former settlements is derived from two sources; (*a*) the general pargana statements drawn up at last settlement; (*b*) the figures given in Mr. Mansel's table of parganawar statistics of settlement appended to his report. Unfortunately the two do not agree. *Primâ facie*, the former should be the more correct, as they show the details for each individual village; but the statement for Firozabad is so defective in its figures for the earlier settlements that it is necessary to take for that pargana the statistics given in Mr. Mansel's report; for the other parganas I have adhered to the general statements.

Statement showing the revenues assessed at previous settlements.

Pargana.	1st settlement, 1805-06.	2nd settlement, 1808-09.	3rd settlement, 1816-17.	4th settlement, 1840.	Expiring revenue.
	Rs.	Rs.	Rs.	Rs.	Rs.
Itimádpur	1,35,600	1,54,545	1,90,694	1,86,279	1,83,671
Firozabad	1,28,050	1,56,716	2,02,025	2,02,485	2,08,989
Panáhat	1,46,139	1,51,771	2,01,651	1,77,010	1,75,575
Fatehabad	1,38,564	1,64,591	1,82,169	1,79,260	1,81,168
Agra	1,24,515	1,52,209	1,75,069	1,83,494	1,84,516
Irádatnagar	1,57,927	1,76,217	1,83,160	1,84,920	1,85,824
Farah	1,01,558	1,29,246	1,69,671	1,52,330	1,69,604
Fatehpur Síkri	1,15,938	1,47,377	1,75,736	1,84,578	1,81,584
Khairagarh	1,16,717	1,47,652	1,65,752	1,71,936	1,63,412
District	11,65,008	13,80,324	16,45,927	16,22,242	16,29,343

The second regular settlement.

60. Of the second regular settlement, which followed three years after, in 1808-09 A.D., there is some account in Mr. Mansel's report on the last settlement. It appears that of the six parganas on the right or south bank of the Jumna, five were settled by Mr. Alexander Ross, the remaining one (Panáhat) by Mr. Trant; but it is not clear who assessed the Doab parganas, as Mr. Mansel merely states that their settlement "was made without any of the detailed inquiry of Mr. Ross." Of the character of Mr. Ross' assessment, and the condition of the country at that time, Mr. Mansel writes as follows:—

"The Agra parganas had long formed the vicinity of the metropolis, and under the Játs and Mahrattas the country had been subjected to a cultivation forced by rack-renting. Farmers were easily to be had, and capital was more abundant than in less populous and more distant provinces. All information establishes this fact. Mr. Ross in 1808, in his reports to the Board of Commissioners, states that most of the estates

in the zila were already near to complete cultivation ; and, with the exception of parganas Farah, Fatehpur Síkri, and Sarhindi, he had already recommended that the triennial settlement, then being formed, should be declared permanent in the zila. On this and other points connected with the settlement I put myself in detailed communication with Bahadur Singh, who was acting diwan of Mr. Ross at the formation of this settlement. From him, too, I learnt that in Huzur Tahsíl, Irádatnagar, Fatehabad, Firozabad, and Khandauli, the resources had been completely drawn out at the conquest;—the Doab parganas having been under the management of General Perron, and the others under that of Colonel Hessing, the administration of both which officers was much superior to that of the Native Governments: while Farah, Fatehpur Síkri, Sarhindi, and Bah Panáhat, possessing a soil of inferior quality, were lying waste to some extent in 1803, and were, therefore, susceptible of future increase from the breaking up of culturable land. Next, as to the character of the assessment, I find from a reference to the settlement reports of Mr. Ross that the allowance of the assets granted to the zemindars was, on an average, somewhat more than one-fourth, and in some few cases that it was nearly one-third. Mr. Ross speaks with confidence of his plans for getting at the gross assets of the lands, and of his success in arriving at the truth, or rather that his estimate was within the range of the actual assets. On the whole, therefore, there seems to have been good ground-work for general views in Mr. Ross' measures, and they have been, with two exceptions, used accordingly. First, Farah was comparatively rather overassessed by Mr. Ross. The soil was poor and the people were turbulent and predatory. The large increase which was exacted on the settlement of 1213-15 fasli bore hard on the capabilities of a division where agriculture was most sluggish and the people most unthrifty in their habits. Secondly, in Fatehpur Síkri, Mr. Ross was less successful in getting at the real assets than elsewhere. The pargana had suffered much during 1804-5 from the Holkar gurdi and the war with Bhartpur. On this very account a low assessment had been imposed by Mr. Ross himself at the previous triennial settlement. Besides this, one Moghraj, kanúngo, held several estates, and could not be induced to support Mr. Ross in his searching inquiry into the state of the mahâls, for which misconduct Moghraj lost his office. In respect to Bah Panáhat, owing to Mr. Ross' removal at the close of 1808, the settlement fell on a new officer, Mr. Trant, under whom, partly from want of complete information, partly from the zemindars being largely Badauriya Rajputs, a class not easy to rackrent, and further, from land being really uncultivated, a low range of Government demand was taken."

The result of the second settlement was to raise the revenue from Rs. 11,65,008 to Rs. 13,80,324, an increase of Rs. 2,15,316, or 16 per cent. An enhancement of the demand was made in every pargana, and there was not much variation in this respect excepting only in Panáhat, where the rise was very small.

The third regular settlement.

61. The next settlement was that of 1816-17 (1223 fasli), which in the Doab parganas was made by Mr. S. M. Boulderson, and is stated "to rank with that of Mr. Ross (in 1809) as founded on a system of detailed and careful investigation as respects aggregate demand, though of the two parganas the assets on Khandauli (now Itimádpur) were more lightly brought under assessment, from the extent of bhaiachára property in that quarter. There being no tenantry in such estates, or at last no general rent-roll, it was difficult at that season to bring such estates under unassessment equal to their natural capabilities." The settlement of the Cis-Jumna parganas appears, however, to have been very unsatisfactory. Mr. Mansel reports:—"The settlement of 1223 fasli in the six parganas west of the Jumna was made by Mr. Wright, the jummas of a few villages, which were recusant, being finally settled by Mr. H. G. Christian. No real information or correct principle of assessment seems to have been possessed by Mr. Wright. Exaggerated douls, secret information, and farming offers were the machinery resorted to for the revision of the demand of the Government. The increase in Farah, Húzur Tahsíl, and Bah Panáhat, as also part

of the present pargana of Fatehabad, was excessive and injurious. Much of the benefit of Mr. Ross' labors was thus marred; and those parganas that continued lightly or moderately assessed owed their fortune to the influence of the parties connected with the confidential advisers of the Collector. Sarhendi, Fatehpur Sikri, and parts of Irádatnagar and Fatehabad, thus remained without any undue pressure on their resources. Mr. Christian very properly reduced the jummas of the villages, which, by reason of recusancy, remained unsettled on his receiving charge of his office."

62. Certainly the enhancement made in the demand was very great. It amounted for the whole district to Rs. 2,65,603, 19 per. cent. above the revenue of 1808, seven years previous, and 41 per cent. above that of the first settlement of 1805, only 11 years earlier. Some of this increase however, about Rs. 77,000, would appear to have been derived from the resumption of invalid grants of revenue-free land; deducting this, the real increase would be about Rs. 1,87, 600, or 34 per cent. above the demand of 1805.

63. The operations under Regulation VII. of 1822 appear to have been very limited, and are said "to have been made on exaggerated soil rates and an excessive assessment." Mr. Mansel's table of statistics shows that they involved an increase of Rs. 10,505 in the villages in which they took place. Practically, however, the settlement of 1816 remained in force until the revision made in 1840.

Revision under Regulation VII. of 1822.

64. The proceedings connected with that revision, exclusive of pargana Khairagarh and talúqa Járkhi in Itimádpur, which were subsequently settled by Mr. Alexander, were reported on by Mr. Mansel, on 30th April, 1841. Having given his reasons (quoted above) for accepting Mr. Ross' settlement of the Cis-Jumna parganas and Mr. Boulderson's of the Trans-Jumna parganas as the basis of his revision, he proceeds to enquire whether the means of the agricultural community had increased from (1) any increase in the productiveness of the soil; (2) any reduction in the proportion of the gross produce required to remunerate the farmer by improvements in land tenures, facilitating the advance of capital by canal irrigation, &c.; or (3) an increase in the price of produce. These three questions he answers in the negative. "The soil," he says, "by common consent of Europeans and Natives connected with the land is overcropped, and its yield is less. Little, if anything, has been done in this quarter by the action of society or legislation to render the net return, or the value of the net return, of farming and cultivation greater: while in respect to prices, though grain in general has decidedly risen during the past thirty years in the Agra market 10 per cent. in price, yet as the rise in price in that proportion of grain, that is of necessity expended in the farmers' and assamis' consumption, has no influence on rents; as the yield appears undoubtedly less; and as the deduction in the earlier assessments was, say, as one-fourth compared to the one-third now usually allowed, there seems not, in this degree of rise, the means of bearing any much greater burden." "On the whole, therefore, the natural rent assets have little improved since the 1216 and 1223 fasli settlements in Agra."

The fourth and last regular settlement.

65. Finally he comes to the conclusion that the settlements of Messrs. Ross and Trant in 1216 fasli and of Mr. Boulderson in 1223 fasli left the Huzur (Agra) Tahsíl, Irádatnagar, most of Fatehabad, and Firozabad assessed at a full amount; that in Farah a jumma somewhat heavy was imposed; while in Khandauli, Panáhat, Fatehpur Sikri, and the talúqadari estates of Fatehabad, some increase was fairly obtainable. The result of his revision was generally in accordance with this conclusion. The only two parganas in which an increase was made were Khandauli (Itimádpur) and Fatehpur Síkri, amounting to 5 per cent. in each above the demand payable the year before the revision took place. In every other pargana the demand was lowered, in Panáhat 12 per cent. and in Farah as much as 13 per cent.

Changes in the revenue demand during the currency of last settlement

66. Since the date of last settlement changes have taken place in the revenue demands of the various parganas which have resulted in a net increase of Rs. 7,101 for the whole district, raising the revenue from Rs. 16,22,242 to Rs. 16,29,343. The increase that has taken place has been chiefly owing to the resumption of revenue-free grants, and of this the greatest portion was due to the assessment of the lands held free of revenue by one Badal Shah, fakir, of Gwalior, the grantee receiving in lieu of them villages of a corresponding value in the Jhansi district. The causes of decrease were (1) the reduction of revenues assessed at last settlement on account of their severity, chiefly in Khairagarh ; (2) reduction on account of lands taken up for public purposes, the railways and the Agra Canal being the most important ; and (3) grants of revenue-free land, chiefly for loyalty in 1857. The following statement gives an abstract of these changes :—

Pargana.	*Change in revenue since last settlement.*		*Details of increase.*			*Details of decrease.*			
	Increase.	Decrease.	Resumption of revenue-free grants.	Alluvion, &c	Total.	Reduction of revenue	Grants of revenue.	Land taken for public purposes.	Total.
	Rs.	Rs.	Rs.	Rs	Rs.	Rs.	Rs.	Rs.	Rs.
Itimadpur ...	...	2,608	...	259	259	928	...	1,939	2,867
Firozabad ...	1,554	...	2,349	...	2,349	...	...	795	795
Pauáhat ...	...	1,435	1,075	80	1,155	...	2,211	379	2,590
Fatehabad ...	1,908	...	2,754	...	2,754	...	...	846	846
Agra ...	1,022	...	5,038	1,469	6,507	165	3,816	1,504	5,485
Irâdatnagar ...	304	...	...	3,700	3,700	440	1,125	1,231	2,796
Farah ...	17,274	...	19,521	...	19,521	321	...	1,926	2,247
Fatehpur Sikri,	...	2,994	...	...	...	1,434	580	920	2,994
Khairagarh ...	...	8,524	...	...	...	8,193	...	331	8,524
District ...	22,662	15,561	30,737	5,508	36,245	11,541	7,732	9,871	29,144

Remissions of revenue in certain villages near the city of Agra.

67. The sum Rs. 1,84,516 does not accurately represent the expiring revenue for the Agra pargana. It was, indeed, the amount shown on the revenue roll : but certain refunds were annually made by Government, amounting in all to Rs. 1,317-3-10, which practically were equivalent to a corresponding decrease in the revenue demand. The facts are as follows. When, in 1859, Government transferred its head-quarters from Agra to Allahabad, the value of the land occupied by houses in the neighbourhood of Agra fell very greatly. It was resolved, therefore, to relinquish the revenue payable on account of those lands which had been taken up for house-building, and thus rendered unfit for cultivation, their value for either purpose having been much affected, if not entirely destroyed. Coincidently with this reduction of the revenue, a reduction of the ground rent paid by the house-owners to the ground landlords (zemindars or old tenants, as the case might be) was enforced. These remissions were on account of such lands as had been assessed to revenue at last settlement being then cultivated, and had, since the date of that settlement, been thrown out of cultivation and built over with bungalows. As these refunds were only made on the ground that this land had been assessed with revenue and was no longer so assessable, they were only to continue till the next revision of settlement. The necessity for them no longer exists, and they have been discontinued. The revenues of the various villages in which they were situated have now been assessed with regard to the existing state of the land. Where it is no longer culturable, being occupied by houses, it has, of course, been classed as unassessable, like all other land occupied by houses throughout the district. Where it has again come under cultivation, it has been assessed accordingly. The rents, as between the zemindars and the tenants, have been adjusted on the same principle whenever the matter has been brought by the parties within the cognizance of the Settlement Courts.

68. During the period immediately following the revision of the settlement in 1841 it was generally found necessary to have resort to the coercive measures of sale

Coercive processes involved in the collection of the revenue under the last settlement.

or farm of the land for arrears of revenue; the areas thus permanently or temporarily alienated were as shown in the margin. In Irádatnagar and Agra the severer measure of sale was almost unemployed, and in Fatehpur Síkri and Firozabad it was infrequent. In Farah, on the other hand, a very large area was sold up, nearly twice as much as in any other pargana. Farming was very general, and its extent is especially remarkable in Khairagarh, where, however, it is counterbalanced by a less frequent resort to auction sale. The necessity for these measures, however, gradually disappeared, and the second decade shows a very marked decrease in the extent of their application. Auction sales have practically ceased; but farming still continues very general, Agra, Fatehabad, and Khairagarh being the most striking examples of it. Much of this farming, however, was due to the rebellion of 1857, this measure having apparently been adopted in many cases as a mode of punishment less severe than actual confiscation; and it may be presumed that had it not been for that event, there would have been the same improvement in this respect as in the matter of sales. This presumption is strengthened by the fact that during the third decade the revenue was generally collected without having recourse to either of the measures in question. Sale, as in the second decade, was not necessary; and there was but little farming even, except in Fatehpur Síkri and Fatehabad. The former of these two parganas, indeed, is remarkable for the comparatively large employment of coercive measures during the concluding period of the settlement. In this respect it differs from the whole of the rest of the district, and shows a decided absence of that improvement which is so marked elsewhere. Generally speaking, however, it is very satisfactory to note to how great an extent the need of severe measures to realise the revenue was confined to the earlier years immediately subsequent to the re-assessment of the demand. It is possible that in those times resort was had to these processes somewhat too readily; but the chief cause in the change that has come over the fiscal history of the district in this respect is, no doubt, the fact that owing to the increase in the value of land, and the rise in prices, and the extension of cultivation, a demand which was somewhat heavy in 1841, has gradually become a burden easily supportable. The first few years that follow any revision of settlement, in which the revenue is enhanced, must, of necessity, be the hardest for the zemindars to tide over. The sudden increase in their liabilities, with a people too much accustomed to live up to the full standard of their income, must inevitably create considerable pressure; and a revenue that will in a few years be easily borne may often at first weigh somewhat heavily. The system of progressive revenues, by which the effect of any rise in the demand is mitigated, is clearly one of much advantage, both to the zemindar and the State, and its adoption will undoubtedly prevent any danger of the recurrence of the results which

Pargana.	First decade.	
	Sold by auction.	Farmed.
	Acres.	Acres.
Itimádpur	7,957	15,410
Firozabad	639	7,424
Panáhat	...	9,064
Fatehabad	7 466	17,765
Agra	29	10,918
Irádatnagar	...	8,106
Farah	13,163	8,459
Fatehpur Síkri	297	...
Khairagarh	1,652	35,055

Pargana.	Second Decade.	
	Sold by auction.	Farm.
	Acres	Acres.
Itimádpur	37	...
Firozabad	134	...
Panáhat	...	4,659
Fatehabad	...	15,592
Agra	1,398	25,873
Irádatnagar	...	8,594
Farah	...	8,172
Fatehpur Síkri	...	3,894
Khairagarh	...	18,579

Tahsíl.	Third decade.	
	Sold by auction.	Farm.
	Acres.	Acres.
Itimádpur	37	...
Firozabad	...	...
Panáhat	...	...
Fatehpur	...	2,294
Agra	...	1,294
Irádatnagar	...	74
Farah	...	...
Fatehpur Síkri	1,927	4,380
Khairagarh	...	160

have been shown to have followed the last revision of the settlement. There is little or no land now held in farm, and the total area that was permanently alienated during last settlement by being sold for arrears of revenue amounted finally to only 15,286 acres.

Transfer of proprietary rights.

69. In the statements on pages 37-41 will be found all the most important information that has been obtained with reference to the transfer of proprietary rights during the currency of last settlement. These statements have been compiled from the numerous more detailed statistics which were given in the pargana assessment reports, to which reference can be made for the elucidation of any point that may seem to require it. The *extent* to which proprietary rights have been alienated may be considered from two different points of view. It may in the first place be estimated by the amount of land which has passed out of the hands of those who were in possession at last settlement, or of their heirs. This will appear from Statement A., which shows that out of a total area of 1,207,726 acres 477,554 acres, or 40 per cent., have been alienated by one or other of the various processes of transfer, while 730,172 acres are still in the possession of those owning them at last settlement or their representatives. Under the second method the extent to which transfers have gone on, may be measured by the sum total of the different areas, which formed the subject of each individual transaction: in this way the area of any land that has been sold or resold, mortgaged or remortgaged, or that has in any way changed hands more than once, appears as often as it has been so transferred to swell the sum total. Statement B. shows this sum total for the three important processes of transfer, sale, auction and mortgage. The other methods of transfer affect but small and insignificant areas. The total of the areas transferred at various times is thus ascertained to have been 786,753 acres, which is equivalent to 65 per cent. of the whole area of the district. The comparative *frequency* of transfer at different periods of the term under consideration may be gathered from statement C. The term of last settlement has been divided into three periods of about 11 years each; and for each period, as well as the whole term, is shewn the percentage of the total area of each pargana and the whole district, which was disposed of by either one of the three principal modes of transfer. Statement D. gives such information regarding the value of land during each of these same periods as may be gathered from the average price fetched. Lastly, in statements E. and F. will be found a comparison of the areas held by each of the most important castes at the commencement and at the close of last settlement. With these remarks as to the object and scope of the statements that have been compiled I will proceed to a closer examination of them.

Actual area alienated. Statement A.

Of the whole district, as mentioned above, 40 per cent. has passed into other hands than those who held it at last settlement, the proportion ranging from a minimum of 33 per cent. in Firozabad and Panáhat to a maximum of 50 per cent. in Farah—in other words, from one-third to one-half of the whole area. Besides Farah, Irádatnagar with a total of 47 per cent., Itimádpur 44 per cent. and Agra 41 per cent., underwent above the average of alienation, while in Fatehpur Síkri, Khairagarh, and the other two named above, the average was not reached. The combinations are curious: Farah, almost the poorest, and Irádatnagar, decidedly the best of the Cis-Jumna tahsils, the former paying nearly the lowest, and the latter nearly the highest revenue rate, appear in the same category; while Khairagarh, another poor tahsil, and Firozabad, another of the best, are alike remarkable for the comparative smallness of the area transferred. It is clear, then, that it is not alone the fertility or otherwise of a tract that determines the extent to which proprietary rights are transferred. Nor would it appear that it was generally much affected by the variations in the rate of revenue, though there are some signs of their exercising some influence in the poorer parganas, Panáhat, Khairagarh, and Farah, where the incidence of the revenue in the land that has been alienated is considerably higher than in the area which has not changed hands. In the richer parganas, Firozabad, Irádatnagar, and Agra, the reverse is the case, and over the district as a whole there is little difference in the rates paid over the two divisions of the area.

Transfer Statement A.—showing the actual area alienated since last settlement.

Pargana.	According to last settlement survey.		Area transferred by						Total transfer.			Remained with the original proprietors.		
	Area.	Revenue.	Private sale.	Mortgage	Auction by Court.	Auction for arrears.	Confiscation.	Gift.	Area.	Revenue.	Rate.	Area.	Revenue	Rate.
	Acres.	Rs.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres	Rs.	Rs. a. p.	Acres	Rs.	Rs. a. p.
Himádpur	140,493	1,89,129	28,569	13,507	8,620	2,136	1,988	7,536	62,426 (44)	81,409	1 4 10	78,067	1,07,720	1 6 1
Firozabad	129,613	2,03,991	20,362	16,724	5,576	627	2,652	...	45,941 (33)	65,716	1 7 0	83,672	1,38,275	1 10 6
Panáhat	216,468	2,07,657	19,049	25,436	6,193	...	20,702	...	71,380 (33)	84,558	1 3 0	145,088	1,16,099	0 12 9
Fatehabad	130,637	1,91,504	19,508	12,356	10,433	4,455	5,177	...	51,919 (40)	77,266	1 7 9	78,718	1,04,238	1 5 2
Agra	111,707	1,95,189	25,085	6,790	14,540	78	59	...	46,552 (41)	85,674	1 11 1	65,155	1,09,515	1 10 11
Irádatnagar	103,074	1,86,569	27,370	4,074	10,375	...	6,799	...	48,618 (47)	85,818	1 12 3	54,456	1,00,751	1 13 7
Farah	128,818	1,70,667	31,171	12,109	10,743	5,257	4,796	1,043	65,119 (50)	91,987	1 6 9	63,699	78,680	1 2 11
Fatehpur Sikri	106,622	1,81,694	16,085	5,492	8,216	2,214	2,162	3,122	37,301 (35)	66,776	1 12 8	69,321	1,14,918	1 10 8
Khairagarh	140,294	1,63,412	13,311	21,987	6,670	519	5,811	...	48,298 (34)	69,835	1 7 2	91,996	93,577	1 0 3
Total ...	1,207,726	16,72,812	200,510	118,475	81,436	15,286	50,146	11,701	477,554 (40)	7,09,039	1 7 9	730,172	9,63,773	1 5 1

NOTE.—The figures in brackets show the percentage of the total area which has been alienated since last settlement.

Transfer Statement B.—showing total of transfers by sale, auction, or mortgage since last settlement.

Pargana.	Sale.	Auction.	Mortgage.	Total.	Percentage of total area of tahsíl.
	Acres.	Acres.	Acres.	Acres	Acres.
Itimádpur	42,422	29,876	30,755	103,053	73·4
Firozabad	27,661	11,513	38,649	77,823	59·4
Panáhat	27,067	65,217	9,964	102,248	47·2
Fatehabad	34,490	20,817	39,029	94,336	72·2
Agra	36,989	20,944	23,546	81,479	72·9
Irádatnagar	38,438	20,906	23,421	82,765	80·4
Farah	46,267	20,861	33,163	100,291	80·0
Fatehpur Sikri	38,535	13,585	19,004	71,124	66·7
Khairagarh	20,489	15,259	37,886	73,634	52·5
District	312,358 40 per cent.	218,978 28 per cent.	255,417 32 per cent.	786,753	65·1

Transfer Statement C.—showing the percentage of the total areas transferred during the three periods of last settlement.

Pargana.	Sale.				Auction.				Mortgage.				Total.			
	Period.			Total.	Period.			Total.	Period.			Total.	Period.			Total.
	1st.	2nd.	3rd.		1st.	2nd.	3rd.		1st.	2nd.	3rd.		1st.	2nd.	3rd.	
Itimádpur	7·1	11·3	11·8	30·2	13·5	2·3	5·5	21·3	6·0	5·7	10·2	21·9	26·6	19·3	27·5	73·4
Firozabad	5·9	6·4	9·1	21·4	5·8	0·9	2·2	8·9	10·1	6·1	13·5	29·7	21·8	13·4	24·8	60·0
Panáhat	2·9	3·8	5·8	12·5	2·2	1·3	1·1	4·6	17·5	5·1	7·5	30·1	22·6	10·2	14·4	47·2
Fatehabad	4·5	12·6	9·3	26·4	7·7	5·5	2·7	15·9	14·1	9·0	6·8	29·9	26·3	27·1	18·8	72·2
Agra	5·2	12·0	15·9	33·1	11·6	3·0	4·1	18·7	9·2	5·[illegible]	6·5	21·0	26·0	20·3	26·5	72·8
Irádatnagar	5·8	22·8	8·8	37·4	10·3	6·1	3·9	20·3	10·5	6·3	5·9	22·7	26·6	35·2	18·6	80·4
Farah	6·6	14·0	16·3	36·9	4·9	4·7	7·0	16·6	15·1	6·3	5·1	26·5	26·6	25·0	28·4	80·0
Fatehpur Sikri	3·9	12·9	19·4	36·2	3·4	4·5	4·8	12·7	1·1	4·8	11·9	17·8	8·4	22·2	36·1	66·7
Khairagarh	1·8	6·2	6·7	14·7	3·8	1·8	5·2	10·8	8·9	6·4	11·7	27·0	14·5	14·4	23·6	52·3
Total	4·6	10·7	11·0	26·3	6·7	4·2	3·9	14·8	9·8	5·8	8·4	24·0	21·0	20·8	23·3	65·1

Transfer Statement D.—showing the prices fetched at mortgage sale, and auction, during last settlement.

Pargana.	Mortgage.				Private sale.				Auction.			
	1st decade.	2nd decade.	3rd decade.	Total.	1st decade.	2nd decade.	3rd decade.	Total.	1st decade.	2nd decade.	3rd decade.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Itimádpur	4 13 8	8 1 8	13 12 3	9 13 4	2 15 10	5 4 10	12 7 4	7 5 2	1 5 9	6 1 9	9 8 1	3 15 5
Firozabad	4 12 3	4 3 9	6 10 8	5 8 6	5 3 3	7 1 4	10 5 3	7 15 1	2 6 8	8 12 5	13 11 1	5 7 5
Panáhat	4 15 7	9 11 7	16 3 3	8 9 2	4 3 11	5 1 7	12 15 0	8 8 8	3 7 8	1 2 3	6 8 8	3 8 7
Fatehabad	5 7 9	7 5 1	10 3 10	7 12 0	3 15 7	5 13 0	10 15 9	7 15 9	3 14 5	3 8 3	10 2 3	4 6 8
Agra	5 0 5	6 10 2	12 12 6	7 13 0	3 7 2	4 9 0	14 10 4	9 3 7	3 12 3	6 1 6	12 10 8	6 1 7
Irádatnagar	11 8 11	8 4 0	12 10 6	11 0 3	6 12 6	4 9 8	19 3 6	8 5 6	4 15 4	6 15 2	23 5 5	9 3 10
Farah	1 9 0	4 0 0	8 0 1	3 1 4	0 15 11	4 15 10	8 10 7	5 6 11	1 2 4	3 10 2	7 8 6	4 7 0
Fatehpur Síkri	4 2 2	6 4 4	5 3 4	5 6 6	6 4 10	7 2 10	7 15 9	7 8 8	4 8 1	5 9 0	10 13 4	7 0 0
Khairagarh	5 4 9	4 14 4	6 0 0	5 8 9	3 15 5	6 13 5	2 9 3	7 5 8	5 4 9	4 14 4	6 0 0	5 8 9
District	5 5 0	6 8 0	10 3 0	7 3 0	4 3 0	5 12 0	11 14 0	7 12 0	3 7 0	5 3 0	9 2 0	5 10 0

Transfer Statement E.—Areas held by each caste at last settlement.

Pargana.	Brahman.	Thakur.	Ját.	Bania.	Káyath.	Ahír.	Kurmi.	Khattri.	Gújar.	Gola-purab.	Rájput.	Musal-man.	Euro-pean.	Lodha.	Goshain.	Miscel-laneous.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Itimádpur	28,253 (20)	62,585 (45)	23,292 (16)	2,368 (2)	539 ...	3,116 (2)	1,335 (1)	667 (1)	28 ...	... ...	... ...	12,678 (9)	4,523 (3)	25 ...	... ...	1,093 (1)	140,493
Firozabad	15,942 (12)	51,973 (40)	340 ...	1,300 (1)	18,169 (14)	10,215 (8)	... ...	... ...	18,745 (15)	... ...	... ...	12,938 (10)	... ...	... ...	... ...	... ...	129,613
Panáhat	72,182 (33)	1,00,631 (47)	... ...	6,749 (3)	1,809 (1)	8,670 (4)	... ...	... ...	6,216 (3)	4,373 (2)	13,251 (6)	785 ...	... ...	102 ...	257 ...	1,443 (1)	216,468
Fatehabad	28,865 (22)	37,272 (29)	... ...	9,203 (7)	5,374 (4)	3,935 (3)	... ...	223 ...	24,546 (19)	54 ...	10,610 (8)	2,006 (2)	5,767 (4)	212 ...	1,592 (1)	492 (1)	130,637
Agra	16,755 (15)	7,540 (7)	24,574 (22)	11,170 (10)	4,468 (4)	6,702 (6)	... ...	2,792 (2)	... ...	... ...	... ...	15,359 (14)	10,053 (9)	8,936 (8)	... ...	3,358 (3)	111,707
Irádatnagar	4,102 (4)	44,837 (43)	3,436 (3)	16,973 (16)	462 (½)	1,588 (2)	... ...	1,822 (2)	3,599 (3)	23,376 (23)	553 (½)	792 (1)	495 (½)	290 (½)	194 (½)	625 (½)	103,074
Farah	12,357 (10)	37,992 (32)	19,379 (16)	7,801 (7)	5,295 (4)	1,687 (1)	29 ...	1,113 (1)	712 (1)	... ...	... ...	11,895 (10)	14,959 (12)	1,190 (1)	... ...	5,105 (5)	119,514
Fatehpur Síkri	12,092 (11)	9,061 (9)	48,686 (46)	5,664 (5)	14,6 3 (14)	... ...	... ...	1,557 (1)	258 ...	17 ...	... ...	10,336 (10)	... ...	3,366 (3)	13 ...	929 (1)	106,622
Khairagarh	15,594 (11)	80,100 (57)	15,006 (11)	7,746 (5)	4,286 (3)	371 ...	... ...	197 ...	9,316 (7)	693 (1)	... ...	4,237 (3)	... ...	1,529 (1)	... ...	1,195 (1)	140,294
Total ...	206,142 (17)	4 31,991 (36)	134,713 (11)	68,974 (6)	55,056 (5)	36,284 (3)	1,365 ...	8,371 ...	63,420 (5½)	28,999 (2½)	24,414 (2)	71,020 (6)	35,797 (3)	15,650 (1)	1,986	14,240	1,198,422

NOTE.—The figures within brackets denote percentages of the total pargana and district areas.

Transfer Statement F.—Areas held by each caste at present settlement.

Pargana.	Brahman.	Thakur.	Ját.	Baniya.	Káyath.	Ahír.	Kurmi.	Khattri.	Gújar.	Gola-purab.	Rájput.	Musal-man.	Euro-pean.	Lodha.	Goshain and Bairagi.	Miscella-neous.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Itimádpur	34,123 (25)	53,798 (38)	21,806 (16)	7,625 (5)	1,864 (1)	2,969 (2)	2,015 (1)	5,215 (4)	... ...	50 ...	... ...	8,816 (6)	1,245 (1)	29 ...	109 ...	829 (1)	140,493
Firozabad	25,904 (20)	52,036 (40)	4,841 (4)	2,565 (2)	9,457 (7)	8,979 (7)	... ...	... ...	19,024 (15)	... ...	... ...	6,746 (5)	... ...	... ...	... ...	61 ...	129,613
Panáhat	81,491 (39)	64,643 (30)	... ...	22,302 (10)	2,491 (1)	6,212 (3)	... ...	14,327 (7)	5,321 (2)	5,488 (2)	11,768 (5)	826 ...	... ...	105 ...	389 ...	1,165 (1)	216,468
Fatehabad	28,198 (21)	35,003 (28)	... ...	11,048 (9)	10,555 (8)	3,112 (2)	... ...	1,622 (1)	23,911 (18)	635 ...	7,242 (6)	6,416 (5)	... ...	68 ...	1,716 (1)	1,106 (1)	130,637
Agra	22,058 (20)	7,808 (7)	27,504 (25)	10,203 (9)	6,201 (6)	7,773 (7)	2,296 (2)	9,604 (9)	... ...	... ...	345 ...	11,087 (10)	1,323 (1)	3,775 (3)	331 ...	1,399 (1)	111,707
Irádatnagar	7,890 (7½)	30,186 (29)	2,522 (3)	12,671 (42)	867 (½)	837 (½)	... ...	16,589 (17)	763 (½)	24,572 (24)	531 (½)	4,343 (4)	... ...	102	251 ...	650 (½)	103,074
Farah	19,719 (16)	33,101 (30)	16,319 (14)	5,142 (4)	6,875 (6)	766 ...	452 ...	17,451 (14)	866 ...	... ...	... ...	14,387 (12)	... ...	1,288 (1)	1,965 (1)	2,983 (2)	119,514
Fatehpur Síkri	16,691 (16)	10,070 (10)	35,751 (33)	4,015 (4)	22,514 (21)	... ...	... ...	5,567 (5)	224 ...	... ...	... ...	7,718 (7)	... ...	1,688 (2)	1,492 (1)	892 (1)	106,622
Khairagarh	16,282 (12)	71,859 (51)	14,420 (10)	8,704 (6)	8,453 (6)	325 ...	... ...	4,702 (4)	7,660 (5)	535 ...	... ...	3,777 (3)	... ...	867 (1)	121 ...	2,589 (2)	140,294
Total ...	252,296 (21)	358,509 (30)	123,163 (10)	84,275 (7)	69,277 (1)	39,973 (2)	4,763 (½)	75,377 (6)	57,769 (5)	31,280 (3)	19,886 (2)	64,116 (5)	2,568 ...	7,922 (1)	5,474 (½)	10,774 (1)	1,198,422

NOTE.—The figures within brackets denote percentages.

70. Of the 40 per cent. that has been transferred—

17 per cent. passed by private sale,
7 „ „ by auction under a decree of the Civil Court,
1 „ „ by „ for arrears of revenue,
4 „ „ by confiscation for rebellion,
and 10 „ „ by mortgage,

So that three-quarters, or 359,079 acres, have been permanently alienated, the transfer of the remainder being only temporary in character. The variations in this respect in the different parganas will appear from the table in the margin. Irádatnagar and Fatehpur Síkri are remarkable for the large proportion of permanent alienations, while the opposite extreme is met with in Khairagarh, in which nearly half of the land transferred has been only mortgaged. Firozabad and Panáhat also show well in this respect; with Agra, Itimádpur, and Farah the reverse is the case.

Tahsíl.	*Percentage of area alienated.*		
	Permanently.	Temporarily.	Total.
Itimadpur ...	35	9	44
Firozabad ...	20	13	33
Panáhat ...	21	12	33
Fatehabad ...	31	9	40
Agra ...	35	6	41
Irádatnagar ...	43	4	47
Farah ...	41	9	50
Fatehpur Sikri...	30	5	35
Khairagarh ...	19	15	34
District ...	30	10	40

Frequency of transfer. Statement B.

71. The statistics of statement B. show that repeated transfers of the same property occur with nearly uniform frequency throughout the district. The same parganas Farah, Irádatnagar, Agra and Itámadpur appear in this statement also as examples of the most extensive alienations and Panáhat, Khairagarh and Firozabad as having escaped the most. Forty per cent. of the transfers were effected by private sale, and 28 per cent. by auction; the remaining 32 per cent. were mortgages.

Comparative extent of transfer at different periods. Statement C.

72. Over the district as a whole, the sum total of the transfers has been almost the same during each of the three periods into which the term of last settlements has been divided, the equivalent of one-fifth of the whole area changing hands each period. Mortgage was somewhat more frequent during the first period than it has been subsequently, but the difference is not great. Taking, however, the individual parganas separately, there are great variations in the respect: for mortgages, for instance, dropped from 15·1 to 5·1 per cent. during the last period in Farah, while in the adjoining pargana of Fatehpur Síkri they increased from 1·1 to 11·9 per cent. The extent of private sale, on the other hand, was in the last period more than double what it was in the first, while auction sales have decreased nearly in the same proportion. In the increase of private sales and decrease of auction sales all the parganas are similar, though of course varying in the extent of the change.

The price of land. Statement D.

73. The value of the land during the last 35 years may be estimated at the average price fetched at private sales, *viz.*, Rs. 7-12 per acre. Nor do the different parganas exhibit any very marked instances of variation from this average, excepting Farah, in which the average price was only Rs. 5-6-11, chiefly owing to the extremely low rate of purchase in the first period. The Agra pargana, on the other hand, shows an abnormally high rate; but considering the enhancement in the value of the land from its proximity to the city, the variation is not unnatural. In the other parganas the price varied within very narrow limits. More important, however, than the average price over the whole term is the fact that the value of land has steadily increased. Whether we look at the average prices fetched at sale, auction, or mortgage during the three periods over the district as a whole, or in the individual parganas, there is the same marked and almost unvarying improvement as we pass from the 1st to the 2nd, and from the 2nd to the 3rd period. Though not an example of the highest average price of land over the whole term, Irádatnagar is remarkable as the pargana in which the value of land has risen considerably above its level else-

where in this district: this is shown in the high prices fetched by its land, 9,105 acres having been sold privately during the last 11 years at a rate of Rs. 19-3-6 per acre, and 4,001 acres sold at auction at Rs. 23-5-3, the highest rate recorded in any part of the district. After Irádatnagar comes Agra, where land has recently fetched an average price of Rs. 14-10-4. Fatehpur Síkri exhibits the smallest amount of progress in this respect, for though the average prices at sale and mortgage over the whole term are not so low as in Farah or Khairagarh, in the last two parganas there has been a great advance in price, especially at sale, which is not the case in Fatehpur Síkri. The present value of land is more accurately represented by the price fetched at sale during the last of the three periods, and will be seen to vary from Rs. 7-15-9 in Fatehpur Síkri to Rs. 19-3-6 in Irádatnagar, the average of the district being Rs. 11-14-0. In speaking, however, of the value of the land it must be remembered that the prices quoted are paid for proprietary rights in land, subject in the first place to the revenue demand payable to the State, and in the second place to the subordinate rights possessed by those tenants who have acquired a right of occupancy, which, as will be seen, affects more than half the area. Both of these liabilities limit very greatly the value of the interests of the landlords, and any comparison instituted between the price of land under these conditions with the value of freehold rights elsewhere, exempt from them, would be fallacious, and give an unduly low estimate of the value of land in this district. There is one other feature which is noticeable, and that is how slightly the price of land sold outright rises above the rate at which it is mortgaged, while that fetched at auction sales falls considerably below either.

The effect of the transfers on the various castes Statements E. and F.

74. Up to this point we have considered the extent to which land has changed hands amongst individuals. The general effect of these transfers on the status and composition of the proprietary body will be better appreciated by noting their result as amongst the different castes. The following statement shows the area occupied by zemindars of each caste holding any important extent of land both at the commencement and close of last settlement, and the rise or fall in wealth and influence of the different classes may be ascertained therefrom :—

Caste.	Actual areas held in acres.				Percentage of district area held	
	At last settlement.	At present settlement.	Since last settlement.		At last settlement.	At present settlement.
			Gain.	Loss.		
Brahman	206,142	252,296	46,154	...	17	21
Thakur	431,991	358,509	...	73,482	36	30
Játs	134,713	123,163	...	11,650	11	10
Baniya	68,974	84,275	15,301	...	6	7
Káyath	55,056	69,277	14,221	...	5	6
Ahír	36,284	30,973	...	5,311	3	2
Kurmi	1,365	4,763	3,398	...	part of 1	part of 1
Khattri	8,371	75,377	67,006	...	part of 1	6
Gújar	63,420	57,789	...	5,651	5½	5
Golapurab	28,959	31,190	2,231	...	2½	3
Rájput	24,414	19,886	...	4,528	2	2
Musalman	71,020	64,116	...	7,904	6	5
European	35,797	2,568	...	33,229	3	part of 1
Lodha	15,650	7,922	...	7,728	1	part of 1
Goshain	1,986	5,474	3,488	...	part of 1	part of 1
Miscellaneous	14,240	10,774	...	3,466	1	1
Total ..	1,138,122	1,198,422	151,949	151,949	...	...

This statement has been drawn up from similar statements in the pargana reports, and gives statistics of the district as a whole, which will be sufficient for the present purpose. The phenomenon usually presented, *viz.*, the gradual diminution of

the land in the hands of the old cultivating communities, is as marked here as elsewhere. Thakurs, Játs, Ahírs, Gujars, the so-called Rájputs (see page 22); and the Malkanas and Mewatis (classed as Musalmans), have all lost areas in some cases of great actual extent, and in all cases large in comparison with their original possessions. A large proportion of the loss sustained by the Thakurs was due to their rebellious conduct in 1857, over 28,000 acres (or about one-fourth of their total losses) having been confiscated on that account. The Rájputs forfeited 3,480 acres, and the Gújars 2,165 acres in the same way. The European zemindars of last settlement have almost entirely disappeared; in Farah they formerly held nearly 15,000 acres. "But their position was exceptional and they were at the most merely temporary occupants;" and in Agra, the estates held by Mr. Wright were transferred to Rao Joti Parshad, Khattri. It is indeed owing chiefly to the purchases of that person that so large an area has been acquired by Khattris, composed partly of the estates of Europeans and partly of that of Rao Patni Mal (Baniya), some 12,000 acres in extent. Next after the Khattris (whose case is exceptional), the greatest gainers are the Brahmans, who generally succeed in extending their possessions. Baniyas and Káyaths have also made great way, especially the former, in spite of their losing the area comprised in Rao Patni Mal's estate. Notwithstanding however, the changes that have taken place, Thakurs still continue the most extensive land-holders, so that they and the Brahmans still hold over half the district, and but little less than the two held jointly forty years ago. The gains and losses of the other castes, however great in proportion to their share in the district, affect comparatively small fractions of the whole. If the parganas be examined individually, it will be observed that the losses of the Thakurs have been fairly uniform throughout; the only exception is that of Panáhat, where more than one-third of their estates have passed from their possession. Brahmans have gained steadily in every pargana except Fatehabad. The diminution of the property of the Játs took place chiefly in Fatehpur Síkri; elsewhere they have held their own. Golapurabs and Gújars have maintained their former position in the parganas in which they were of any weight, *viz.*, the former in Irádatnagar, and the latter in Fatehabad and Firozabad. Musalmans lost chiefly in Itimádpur, Firozabad, and Agra; their gain in Fatehpur arose chiefly from the gift by General Richards of his estates to a favourite Muhammadan servant. They would appear to have lost in Farah, but the losses of the Malkanas in that pargana being shown under the same heading are the cause of this; genuine Musalmans have gained there. On the whole it may be concluded that there has been no very sweeping change in the composition of the proprietary body, the extent of the possessions and influence of the different castes not having altered to any important degree.

Present position of the proprietary classes.

75. In considering the present position of the different castes in the ranks of the proprietors and the composition of that body, we must compare the extent to which each class shares in the proprietary rights, with the proportion it forms of the total population. Thakurs are considerably the largest proprietors, and own 30 per cent. of the land in the district, though they form but 10 per cent. of the population: they are in possession of nearly half as much again as the Brahmans, who are the next most extensive landlords. The Brahmans, too, own a larger share than is proportionate to their numbers, being zemindars over 21 per cent. of the area, while they are but 14 per cent. of the population. Játs own 10 per cent., a little more than their proportionate share. Káyaths and Baniyas, as usual, hold proprietary rights of great extent in comparison with their numbers. The same is the case with the Khattris. Gújars are of some importance as zemindars in Firozabad and Fatehabad. Musalmans own comparatively little except in Farah and Agra. The most extensive of the possessions of the Brahmans are in Panáhat. Thakurs own largely everywhere except in Agra and Fatehpur Síkri, in which two parganas the Játs are the chief zemindars. Banyas hold chiefly in Panáhat, Fatehabad, and Agra: Káyaths in Fatehpur Sikri. Golapurabs own little anywhere except in Irádatnagar, where they own nearly one-fourth of the pargana. Khattris hold largely in Irádatnagar and Farah.

PART III.

COMPARISON OF PAST AND PRESENT CONDITION.

Comparison of former and present statistics of area.

76. In endeavouring to ascertain the changes, progressive or otherwise, that have taken place since last settlement, we are of necessity limited to the consideration of that portion of the area for which statistics drawn up at that time are available. The respect in which those statistics are defective is that they contain no reference to the areas included in villages, which were not assessed with revenue payable to Government. In almost every pargana there was some extent of land, for which on this account no information is forthcoming: notably in the case of Panáhat, where some 41,000 acres of land, the revenue of which was alienated, do not appear in the statements then compiled. Relatively, however, to the total area of the district, the extent of these lands is so small, that the conclusion drawn from what can be ascertained with regard to the remainder, may be accepted as generally applicable. The area, for which statistics for both dates are forthcoming, amounts by the present survey to 1,131,980 acres. By the measurements of last settlement this area is shown as 1,110,407 acres, a difference of 21,573 acres, which, large as it appears, is not 2 per cent. of the whole—a discrepancy which is within the limit that may be attributed to difference of measurement, especially as it may be observed that the excess is, in eight of the nine parganas, uniformly on the side of the present area.

Change in cultivated area.

77. The cultivated area is now 785,991 acres, as against 766,369 acres formerly; an increase of 19,622 acres, a difference of 2·56 per cent., or, allowing for the difference of measurement, 2·51 per cent. There is considerable variation in this respect in the different parganas, as will appear from the table in the margin. Khairagarh is peculiar as being the only pargana where the area of recorded cultivation has diminished. Omitting it, the average increase over the rest of the district is nearly 4 per cent. Those in which the extension has been below the average are Irádatnagar, Firozabad, Panáhat, Agra, and Fatehabad; in Fatehpur Síkri and Itimádpur it has been slightly, and in Farah considerably above the average. It might be expected that, in the former class, the proportion of culturable land still untouched would be found to be below average, and such is the case in four out of those five parganas (Irádatnagar being the exception): and the conclusion which follows is that cultivation had not spread, because there was no room for its extension. For a similar reason, the large available area in Fatehpur Síkri and Farah may account for their growing cultivation. But there are other causes at work which must certainly be sought for, to explain the standstill in Irádatnagar, and serious retrogression in Khairagarh, both of which have still more than their average of untilled land recorded as culturable. With regard to all but the three western parganas, the Settlement Officer who assessed them came to the conclusion that "the great bulk of the 'culturable' land is too inconveniently situated and too poor to repay the cost of cultivation," and that "there is no reason to believe that much addition will ever be made to the present cultivated area;" adding that "this is not surprising when we find that Mr. Ross even in 1808 considered that most of the estates in the zila were already near to complete cultivation, and that no extensive addition could be expected." The western parganas were more backward, and the progress made in Farah especially is what might have been hoped for. But this progress renders the state of Khairagarh all the more strange and exceptional. This backwardness, it must be stated, is confined to that portion of the pargana which lies to the south of the Utangban. It must, I think, be attributed partly to natural inferiority of soil, the practical impossibility of any great increase in irrigation, and the scantiness of the population, which here numbers only 397 persons to the square mile. That there is good ground for holding so low an estimate of the land classed as "culturable,"

Pargana.	Difference per cent in cultivated area.
Itimádpur ...	+5·4
Firozabad ...	+1·3
Panáhat ...	+2·0
Fatehabad ...	+5·2
Agra ...	+3·0
Irádatnagar ...	+0·4
Farah ...	+7·9
Fatehpur Síkri ...	+[illegible]·0
Khairagarh ...	—4·0
District ...	+2·5

Comparative statement of areas at the last and present settlements.

Pargana.	Last Settlement.						Present Settlement.					
	Total.	Unassessable.	Culturable.	Cultivated.			Total area.	Unassessable.	Culturable.	Cultivated.		
				Irrigated.	Dry.	Total.				Irrigated.	Dry.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Itimádpur	132,356	32,919	6,081	55,456	37,900	93,356	135,783	25,352	11,941	70,139	28,351	98,490
Firozabad	130,748	35,829	5,602	66,642	22,675	89,317	129,721	30,365	8,821	76,093	14,442	90,535
Panáhat	174,008	69,829	6,894	12,748	84,537	97,285	177,961	62,951	15,721	22,459	76,830	99,289
Fatehabad	127,433	37,649	3,323	53,193	33,268	86,461	132,169	29,451	13,443	52,109	37,166	89,275
Agra	99,918	16,483	8,093	47,804	27,538	75,342	101,987	15,205	9,135	54,346	23,301	77,647
Irádatnagar	99,452	14,094	9,221	47,586	28,551	76,137	100,014	11,993	11,724	47,404	28,893	76,297
Farah	105,295	17,403	8,608	35,397	43,887	79,284	109,042	10,670	13,483	42,304	42,585	84,889
Fatehpur Síkri	104,068	13,107	13,969	39,597	37,395	76,992	106,271	9,065	16,254	40,600	40,352	80,952
Khairagarh	137,129	21,624	23,310	35,525	56,670	92,195	139,032	18,618	31,797	35,204	53,413	88,617
Total ...	1,110,407	258,937	85,101	393,948	372,421	766,369	1,131,980	213,670	132,319	440,658	345,333	785,991

and that the interpretation applied to that term at the present survey was as wide as possible, may be gathered from the fact that in the whole area, 132,319 acres have now been so classed, as against only 85,101 acres at last settlement. Now from these 85,101 acres must have come the 19,622 acres that have been added to the cultivated area, leaving only 65,479 acres: so that no less than 66,840 acres of what was shown before as 'barren,' has now been brought in to make the present culturable area. Very much of it in fact consists of lands in and about the ravines which, as it grows grass and trees, could not be called 'barren,' though for all purposes of cultivation it is so practically.

78. The accuracy of these conclusions depends on the presumption that the term cultivated' is used in the same sense in the two sets of figures. In the statistics of this settlement the new fallow area was separated from the cultivated area, and for the purpose of this comparison has been included under the head culturable, but in those of last settlement there is only one heading, 'old waste.' It is therefore doubtful under what heading "new fallow" was then included. Nothing is said in the body of Mr. Mansel's report which gives any clue; but I find in appendix B. of that report a statement of acre rates in adjacent districts in which the acre rate on cultivation is calculated on the cultivated area, *inclusive of new fallow.* It may be presumed that this was also done in the statements of this district. If this supposition is correct, the present 'new fallow' should be added to the cultivated area, and the increase calculated accordingly. The result of this is here shown. This estimate again is based on the assumption, that the new fallow area of last settlement was the same as it is now: it was probably greater, so that the progress indicated may be taken as under, rather than over the mark. It may at least be safely concluded that cultivation has increased somewhat more than would appear from the actual statistics, but still not, on the whole, to any great extent.

Tahsil.	Increase per cent. in cultivation, inclusive of new fallow.
Itimádpur ...	+6·3
Firozabad ...	+1·5
Panáhat ...	+3·8
Fatehabad ...	+6·6
Agra ...	+4·6
Irádatnagar ...	+1·0
Farah ...	+10·6
Fatehpur Síkri ...	+8·3
Khairagarh ...	·0
District ...	+4·3

79. The next point for inquiry is, as to what progress has been made in the matter of irrigation. In the table in the margin will be found the increase per cent. in the irrigated area (corrected for difference of measurement) for each pargana, as compared with the irrigated area of last settlement. Itimádpur and Farah have improved considerably in this respect, as much as in respect to increase of cultivation. In Panáhat the progress has been relatively to its previous irrigation very great, but the actual increase it involves only amounts to 9,700 acres. Fatehpur Síkri shows hardly any increase, Irádatnagar none, and Khairagarh and Fatehabad would appear to have retrograded. Mr. Smith in his reports on Irádatnagar and Fatehabad notices this unusual result, and having satisfied himself by repeated inquiries of the substantial accuracy of the present returns, and judging from the figures of Mr. Gubbins' revision of settlement, which showed a much smaller irrigated area than that recorded at last settlement, he came to the conclusion that the irrigated area had been then over-estimated, and that there had really been some slight increase of irrigation; and in support of this he quotes Mr. Mansel's remark that "owing to various causes the survey work could not be characterized as possessing adequate accuracy." In Fatehpur Síkri, however, a comparison of the number of wells in work at last settlement with the number now in use, led me to think that the area recorded as irrigate

Change in the irrigated area.

Tahsil.	Percentage of former irrigation.	Percentage of present irrigation.	Actual increase per cent. in irrigation.
Itimádpur ...	57	71	+26
Firozabad ...	75	84	+14
Pináhat ...	13	22½	+74½
Fatehabad ...	61	58	−2
Agra ...	63	69	+14
Irádatnagar ...	63	62	...
Farah ...	45	49	+19
Fatehpur Síkri ...	50	50	+3½
Khairagarh ...	36	40	1
District ...	51	55	+11¾

from them had not been exaggerated. Whatever may be the case, it is clear that at any rate irrigation in these four parganas has been practically at a standstill. The net result for the whole of the area, for which we have statistics, is an increase of 46,710 acres, or nearly 12 per cent.; and, if this may be held true for the whole district, it would follow that some 51,000 acres have been added to the irrigated area of last settlement.

80. The conclusion to which we are led by these statistics is that the cultivation of the district generally has increased but little, except perhaps in Farah; but that this does not indicate the existence of any hostile element at work, and is rather due to the fact that there is little land left, which would at present repay the cost of cultivation, none but the poorest land remaining available; that there are, however, signs of considerable general progress in respect to irrigation, but with great variation in different parts of the district, some portions having improved very much in this respect and others having remained practically unchanged.

Area Statement A.—(Old Parganas.)

Pargana.	Total area.	*Unassessable.*			*Assessable.*		
		Revenue-free.	Barren.	Total.	Culturable.	Cultivated.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Itimádpur	137,027	2,567	24,698	27,265	11,849	97,913	109,762
Firozabad	129,937	11	30,368	30,379	8,839	90,719	99,558
Panáhat	218,536	38,453	63,285	101,738	15,916	100,882	116,798
Fatehabad	132,139	...	29,793	29,793	13,133	89,213	102,346
Agra	117,964	11,683	16,737	28,420	10,127	79,417	89,544
Irádatnagar	104,869	3,119	11,258	14,377	12,423	78,069	90,492
Farah	128,168	2,731	11,275	14,006	15,796	98,366	114,162
Fatehpur Síkri	106,274	2,393	6,462	8,855	16,430	80,989	97,419
Khairagarh	139,031	750	17,096	17,846	32,552	88,633	121,185
Total	1,213,945	61,707	210,972	272,679	137,065	804,201	941,266

Area Statement B.—(Old Parganas.) Details of revenue-paying land.

Pargana.	Total area.	Barren.	Culturable.	Cultivated.		
				Irrigated.	Dry.	Total.
Itimádpur ...	134,460	24,698	11,849	69,843	28,070	9[illegible],913
Firozabad ...	129,926	30,368	8,839	76,260	14,459	90,719
Pináhat ...	180,083	63,285	15,916	22,742	78,140	100,882
Fatehabad ...	132,139	29,793	13,133	52,103	37,110	89,213
Agra ...	106,281	16,737	10,127	54,887	24,530	79,417
Irádatnagar ...	10[illegible],750	11,258	12,423	48,369	29,700	8[illegible],069
Farah ...	125,437	11,275	15,796	48,700	49,666	98,366
Fatehpur Síkri ...	10[illegible],881	6,162	16,430	40,602	40,387	80,989
Khairagarh ...	138,28[illegible]	17,096	32,552	35,212	53,421	88,633
Total ...	1,152,238	2[illegible]0,972	137,065	448,718	355,483	804,201

Area Statement C.—(Old Parganas.) Details of revenue-free land.

Pargana.	Total area.	Barren.	Culturable	Cultivated.		
				Irrigated.	Dry.	Total.
Itimádpur ...	2,567	148	113	2,139	167	2,306
Firozabad ...	11	...	11	...	...	...
Pináhat ...	38,453	16,756	2,411	2,665	16,621	19,286
Fatehabad ...	...	...	...	...	...	...
Agra ...	11,684	2,152	1,363	5,248	2,920	8,168
Irádatnagar ...	3,119	372	346	1,559	842	2,401
Farah ...	2,731	493	867	495	876	1,371
Fatehpur Síkri ...	2,393	143	333	1,129	788	1,917
Khairagarh ...	750	10	232	78	430	508
Total ...	61,707	20,074	5,676	13,313	22,644	35,957

Area Statement D.—(Old Parganas.) Totals of Statements C. and D.

Pargana.	Total area.	Barren.	Culturable.	*Cultivated.*		
				Irrigated.	Dry.	Total.
Itimádpur ...	137,027	24,846	11,962	71,982	28,237	100,219
Firozabad ...	129,937	30,368	8,850	76,260	14,459	90,719
Pináhat ...	218,536	80,041	18,327	25,407	94,761	1,20,168
Fatehabad ...	132,139	29,793	13,133	52,103	37,110	89,213
Agra ...	117,964	18,889	11,490	60,135	27,450	87,585
Irádatnagar ...	104,869	11,630	12,769	49,928	30,542	80,470
Farah ...	128,168	11,768	16,663	49,195	50,512	99,737
Fatehpur Síkri ...	196,274	6,605	16,763	41,731	41,175	82,906
Khairagarh ...	139,031	17,106	32,784	35,290	53,851	89,141
Total ...	1,213,945	231,046	142,741	462,031	379,127	810,158

Area Statement A.—(New Parganas.)

Pargana.	Total area.	Unassessable.			Assessable.		
		Revenue free.	Barren.	Total.	Culturable.	Cultivated.	Total.
Itimádpur	137,027	2,567	24,693	27,265	11,849	97,913	109,762
Firozabad	129,937	11	30,368	30,379	8,839	90,719	99,558
Pináhat ...	218,636	38,453	63,285	101 738	15,916	100,882	116,798
Fatehabad	154,598	...	31,819	31,819	13,433	109,346	122,779
Agra ...	133,568	11,683	18,557	30,240	13,916	89,412	103,328
Fatehpur Síkri ...	174,171	2,542	12,879	15,421	26,025	132,725	158,750
Khairagarh ...	198,209	3,869	24,083	27,952	40,115	130,142	170,257
Total ...	1,146,946	59,125	205,689	264,814	130,093	751,139	881,232
Transferred to Muttra district.	67,899	2,582	5,283	7,865	6,972	53,062	60,034
GRAND TOTAL ...	1,213,945	61,707	210,972	272,679	137,065	804,201	941,266

Area Statement B.—(New Parganas). Details of revenue-paying land.

Pargana.	Total area.	Barren.	Culturable.	Cultivated.		
				Irrigated.	Dry.	Total.
Itimádpur	134,460	24,698	11,849	69,843	28,070	97,9 3
Firozabad	129,926	30,368	8,839	76,260	14,459	90,719
Pináhat ...	180,083	63,285	15,916	22,742	78,140	100,882
Fatehabad	154,598	31,819	13,433	66,589	42,757	109,346
Agra ...	121,885	18,557	13,916	60,027	29,385	89,412
Fatehpur Síkri ...	171,679	12,879	26 025	68,090	64,635	132,725
Khairagarh ...	194,840	24,083	40,115	59,922	70,220	130,142
Total ...	1,086,921	205,689	130,093	423,473	327 666	751,139
Transferred to Muttra district.	65,3 7	5,283	6,972	25,245	27,817	53 062
GRAND TOTAL ...	1,152,238	210,972	137,065	448,718	355,483	804,201

Area Statement C.—(New Parganas.) Details of revenue-free land.

Pargana.	Total area.	Barren.	Culturable.	Cultivated.		
				Irrigated.	Dry.	Total.
Itimádpur ...	2,567	148	113	2,139	167	2,306
Firozabad ...	11	...	11	...	...	...
Pináhat ...	38,453	16,756	2,411	2,665	16,621	19,286
Fatehabad ...	...	...	...	...	...	...
Agra ...	11,683	2,152	1,363	5,248	2,920	8,168
Fatehpur Síkri ...	2,542	147	341	1,201	853	2,054
Khairagarh ...	3,869	382	578	1,637	1,272	2,909
Total ...	59,125	19,585	4,817	12,890	21,833	34,723
Transferred to Muttra district.	2,582	489	859	423	811	1,234
GRAND TOTAL ...	61,707	20,074	5,676	13,313	22,644	35,957

Area Statement D.—(New Parganas.) Totals of revenue-paying and revenue-free areas.

Pargana.	Total area.	Barren.	Culturable.	Cultivated.		
				Irrigated.	Dry.	Total.
Itimádpur	137,027	24,846	11,962	71,982	28,237	100,219
Firozabad	129,937	30,368	8,850	76,260	14,459	90,719
Pináhat ...	218,536	80,041	18,327	25,407	94,761	120,168
Fatehabad ...	154,598	31,819	13,433	66,589	42,757	109,346
Agra .	133,568	20,709	15,279	65,275	32,305	97,580
Fatehpur Síkri ...	174,171	13,026	26,366	69,291	65,488	134,779
Khairagarh ...	198,209	24,465	40,693	61,559	71,492	133,051
Total ...	1,146,046	225,274	134,910	436,363	349,499	785,862
Transferred to less Muttra district.	67,899	5,772	7,831	25,668	28,628	54,296
GRAND TOTAL ...	1,213,945	231,046	142,741	462,031	379,127	840,158

Area Statement E.—(New Parganas.) Details of barren land.

Pargana.	Total barren land.	Actual barren.	Site.	Ravines.	Water.	Road.	Taken up for public purposes.	Hills.
Itimádpur	24,846	4,969	1,400	12,758	3,114	1,729	936	...
Firozabad	30,368	11,826	1,388	14,848	1,674	632	...	...
Pináhat ...	80,641	1,244	2,069	66,460	7,933	1,949	386	...
Fatehabad ...	31,819	3,546	1,528	18,990	4,487	2,599	669	...
Agra ...	20,709	3,371	3,008	5,501	4,152	1,865	2,812	...
Fatehpur Síkri ..	13,026	6,815	2,060	...	676	2,309	1,166	...
Khairagarh ...	24,465	6,989	1,622	...	3,072	2,268	607	9,907
Total ...	225,274	38,700	13,075	118,557	25,108	13,351	6,576	9,907
Transfered to Muttra district.	5,772	4,425	708	...	639	...	...	...
Grand Total ...	231,046	43,125	13,783	118,557	25,747	13,351	6,576	9,907

Area Statement F.—(New Parganas.) Details of culturable area of revenue-paying land.

Pargana.	Total culturable.	Old waste.	Bágh.	New fallow.
Itimádpur	11,849	10,631	466	752
Firozabad	8,839	7,673	990	176
Pináhat	15,916	13,555	498	1,863
Fatehabad	13,433	11,721	826	886
Agra	13,916	11,327	717	1,872
Fatehpur Síkri	26,025	21,848	442	3,735
Khairagarh	40,115	35,696	401	4,018
Total	130,128	112,456	4,370	13,302
Transferred to Muttra district	7,831	6,288	250	1,293
Grand Total	137,959	118,744	4,620	14,595

Area Statement G.—(New Parganas). Details of culturable area of revenue-free land.

Pargana.	Total culturable.	Old waste.	Bágh.	New fallow.
	Acres.	Acres.	Acres.	Acres.
Itimádpur	113	96	11	6
Firozabad	11	..	11	...
Pináhat	2,411	2,[illegible]85	167	159
Fatehabad	...	..	...	...
Agra	1,363	1,060	205	98
Fatehpur Síkri	341	333	4	4
Khairagarh	578	484	5	89
Total ...	4,817	4,058	403	356

Area Statement H.—Totals of Statements F. and G.

Pargana.	Total culturable.	Old waste.	Bágh.	New fallow.
	Acres.	Acres	Acres.	Acres.
Itimádpur	11,982	10,727	477	758
Firozabad	8,850	7,673	1,001	176
Pináhat	18,327	15,640	665	2,022
Fatehabad	13,433	11,721	826	886
Agra	15,279	12,387	922	1,970
Fatehpur Síkri	26,366	22,181	446	3 739
Khairagarh	40,693	36,180	406	4,107
Total ...	134,910	116,509	4,743	13,658

Statistics of the present area.

81. I will now proceed to discuss the statistics of area as now ascertained, and the most important facts to be gathered from them. The following statement shows the chief divisions of the area of the district considered simply with reference to its capacity for cultivation, and without regard to assessability to revenue. It is drawn up in accordance with the former distribution of the parganas, and so includes the 84 villages since transferred to Muttra. The statistics re-compiled so as to agree with the present arrangement are given in Statement D, page 51.

Pargana.	Total area.	Barren.	Culturable.	Cultivated.		
				Irrigated.	Dry.	Total.
	Acres.	Acres	Acres.	Acres.	Acres.	Acres.
Itimádpur	137,027	24,846	11,962	71,982	28,237	1,00,219
Firozabad	129,937	30,368	8,850	76,260	14,459	90,719
Pináhat	218,536	80,041	18,327	25,407	94,761	1,20,168
Fatehabad	132,139	29,793	13,133	52,103	37,110	89,213
Agra	117,964	18,889	11,490	60,135	27,450	87,585
Irádatnagar	104,869	11,630	12,769	49,928	30,542	80,470
Farah	128,168	11,768	16,663	49,195	50,542	99,737
Fatehpur Síkri	106,274	6,605	16,768	41,731	41,175	82,906
Khairagarh	139,031	17,106	32,784	35,290	53 851	89,141
* District	1,213,945	231,046	142,741	462,031	379,127	840,158

* NOTE.—These figures do not exactly agree with those given in the rent-rate reports. Since their submission errors have been detected and corrections made accordingly; and the statement as now drawn up is the result of these corrected figures.

For the purpose of comparison and to render clearer the force of those statistics, I add a table showing the percentages for the same details as those for which actual areas are given above:—

Pargana.	Total area.	Percentage of area.					Percentage of cultivated.	
		Barren.	Culturable.	Cultivated.				
				Irrigated.	Dry.	Total.	Irrigated.	Dry.
	Acres.							
Hímádpur ...	137,027	18	9	53	20	73	72·6	27·4
Firozabad ...	129,937	23	7	59	11	70	84·3	15·7
Pináhat ...	218,536	37	8	12	43	55	21·8	78·2
Fatehabad ...	132,139	22	10	39	28	68	57·3	42·7
Agra ...	117,964	16	10	51	23	74	68·9	31·1
Irálatnagar ...	104,863	11	12	48	29	77	62·3	36·6
Farah ...	128,168	9	13	38	40	78	48·7	51·3
Fatehpur Sikri ...	106,274	6	16	39	39	78	50·0	50·0
Khairagarh ...	139,031	12	24	25	39	64	39·6	60·4
District ...	1,213,945	19	12	38	31	69	55·	45·

82. Of the 1,213,945 acres, or 1,897 square miles, 231,016 acres, or 361 square miles, 19 per cent., were classed at survey 'barren' and 'unculturable.' It is of some importance to inquire whether all this land is actually incapable of cultivation, for it has been shown that if this is the case there is very small room for any extension of the cultivated area. An analysis of the different headings into which this barren area is divided shows— The barren lands.

6 per. cent. of it is land occupied by the sites of villages and towns.
6 " " roads.
11 " " rivers and streams.
4 " " stony hills.
3 " taken up for Government purposes.

With regard to this portion of the area, 70,000 acres, nearly one-third of the whole, there can be no doubt of the accuracy of the classification. The remainder is divided into two classes—(1) land barren by nature of the soil (such as usar, &c.); (2) land barren by accident of position—the ravines. Under the former heading were included 43,125 acres, or 19 per cent., while no less than 118,557 acres, or 51 per cent. (185 square miles), were classed as 'ravines'. There can be little doubt that for all practical purposes this land is actually barren, and was rightly so classed.

83. After deducting the barren area, there are 982,899 acres, 1,536 square miles and 81 per cent. of the total area, consisting of culturable land; and of this 840,158 acres rather more than four-fifths is actually cultivated. The culturable area recorded as uncultivated is 137,959 acres; but under this heading is included the area under groves, amounting to 4,620 acres, leaving actually 133,339 acres available for cultivation. The relative extent of culturable waste varies to a remarkable extent in the different parganas. It is least of all (8 per cent. of the total area) in the Trans-Jamna parganas and in Pináhat: in the Jamna-Utanghan tract it is largest to the west, in Fatehpur Sikri and Farah, where it is from 12 to 13 per cent., and falls to 10 per cent. in the east. But it reaches a maximum in Khairagarh, where it is 24 per cent., double the district average. Of this waste, 14,595 acres shown as new fallow consists of land that had been cultivated within a few years previously to survey, but was then lying fallow; while the remaining 118,744 acres were old waste. The proportions of these divisions of the area, culturable but uncultivated, are as follow:— The culturable area.

86 per cent. old waste.
10 " new fallow.
4 " groves.

84. The area under groves is remarkably small. This absence of groves, and indeed of trees also, is one of the peculiarities of this as compared with any of the adjoining Duab districts. Even between the two portions of this district, north and Groves.

south of the Jamna, there is a marked contrast; for while in the former there are groves in 6 acres out of every 1,000, in the latter only 3 acres per mille are so occupied. Over the whole district groves cover less than 4 acres per mille. While through the district generally 10 per cent. of the waste is new fallow, there are two parganas, Firozabad and Irádatnagar, where this proportion is very much less, being in the latter 5, and in the former only 2 per cent.; and as in the Irádatnagar the average of waste lands is only equal to the district average, while in Firozabad it is much less, it is clear that in these parganas cultivation has almost reached the limit, to which it is capable of extension. On the other hand, the three western parganas, Khairagarh, Fatehpur Síkri, and Farah, have not only a much larger area of waste lands than the other parganas, as mentioned above, but a larger proportion of this area is new fallow; so that there is certainly considerable room, as far as the land is concerned, for cultivation to increase.

The cultivated area.

85. Of the total area under report 69 per cent. is at present cultivated, 840,158 acres in all. It varies in the four natural divisions of the country as follows:—

North of Jamna	71	per cent.
Between Jamna and Utanghan	74	„
South of Utanghan in Khairagarh	59	„
Ditto in Pináhat „	55	„

In the first-named tract there is a slight excess in Itimádpur to the west as compared with Firozabad to the east. In the second division, the area under the plough is relatively largest in Farah and Fatehpur Síkri, where the proportion is as high as 78 out of every 100 acres, and nearly as high in Irádatnagar, while it is lowest in Fatehabad, where the percentage is only 68. South of the Utangan there is a great change, the extent of cultivation being much more limited. So far the two tracts are alike; but in Pináhat there is little room for any increase, while the reverse is the case in South Khairagarh.

Extent of irrigation.

86. Lastly, there is the division of the cultivated area into irrigated and dry lands. Generally speaking, little over half of the cultivation is irrigated, but in this respect the different parts of the district differ very much, as has been already shown in Part I. (page 11). The characteristics of the parganas as now arranged was then discussed. I will now merely add a table showing the comparative extent in irrigation in the parganas under the former distribution. This table further analysed gives the following more general result:—

	Pargana.	Percentage of cultivated land.	
		Irrigated.	Dry.
(1)	Itimádpur ...	72·6	27·4
(1)	Firozabad ...	84·3	15·7
(2)	Fatehabad ...	57·3	42·7
(2)	Agra ...	68·9	31·1
(2)	Irádatnagar ...	62·0	38·0
(2)	Farah ...	48·7	51·3
(2)	Fatehpur Síkri ...	50·0	50·0
(2)	North Khairagarh ...	50·3	49·7
(3)	South Khairagarh ..	33·1	66·9
(4)	Pináhat ...	21·8	78·2
	District ...	55·0	45·0

(1) North of the Jamna	78	per cent. of cultivation irrigated.	
(2) Between Jamna and Utanghan ...	53	„	„
South of Utanghan—			
(3) In Khairagarh	33	„	„
(4) „ Pináhat	22	„	„

These figures bring out very clearly how essentially these divisions of the district differ from one another in regard to that important feature, their means of irrigation.

Subdivision of the district into lands paying revenue and lands exempt from such payment.

87. So far the district has been considered as a whole, solely with reference to its agricultural characteristics. But there is a portion of it which does not pay revenue to Government, and is therefore excluded from the operations of assessment. This unassessable area, as I have already explained (*vide* page 19) consists of two classes of land—(1) that in which the proprietary right is held by muáfidars, in which case no revenue has to be assessed; and (2) that in which the muáfidar is only an assignee of the Government rights, in which case the proprietors are liable to the payment of revenue, but to the muáfidar instead of to Government. As far, however, as

Government is concerned both classes are free of revenue. The division of the district area under the two heads revenue-paying and revenue-free is as follows :—

	Total area.	Total area.	Barren.	Culturable.	Cultivated. Irrigated.	Cultivated. Dry.	Cultivated. Total.
A.		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
District in 1872 at commencement of settlement.	Revenue-paying ...	1,152,238	210,972	137,065	448,718	355,483	804,201
	Revenue-free ...	61,707	20,074	5,676	13,313	22,644	35,957
B.	Total ...	1,213,945	231,046	142,74	462,031	378,127	840,158
Area transferred to Muttra in 1878.	Revenue-paying ...	65,317	5,283	6,972	25,245	27,817	53,062
	Revenue-free ...	2,582	489	859	423	811	1,234
C.	Total ...	67,899	5,772	7,831	25,668	28,628	54,296
Area of present district, exclusive of villages added from Jalesar to Itimádpur.	Revenue-paying ...	1,086,921	205,689	130,093	423,473	327,666	751,139
	Revenue-free ...	59,125	19,585	4,817	12,893	21,833	34,723
	Total ...	1,146,046	225,274	134,910	436,363	349,499	785,862

88. Having given these details for the sake of future reference, I shall now confine my remarks to the area under report, shown under heading A. The area the revenue of which has been alienated amounts to 5 per cent. of the whole. The pargana statement given on page 48 shows that the greater part of this lies in the Pináhat and Agra parganas ; in the former the jágir and other estates of the Raja of Bhadawar, and in the latter the Shahr Sawad and a few revenue-free villages form the bulk of this area. In Fatehabad there is no revenue-free land, and only a small patch of 11 acres in Firozabad.

89. Thus 95 per cent. of the district area is liable to the payment of revenue to the State, an area of 1,152,238 acres. But within this there are barren lands which are classed as unassessable, and the area actually assessable consists of only culturable and cultivated lands. The areas under these several headings are in the following proportions of the total area :— The revenue-paying area.

Total area of district.	Unassessable. Revenue-free.	Unassessable. Barren	Unassessable. Total.	Assessable. Culturable	Assessable. Cultivated.	Assessable. Total.
Acres. 1,213,945	5	17·5	22·5	11·3	66·2	77·5

As the extent of the revenue-free land is so limited, it follows naturally that the details of the revenue-paying land do not very materially form those of the total area, the characteristics of which have been fully described already. The actual areas are shown in Statement B. on page 49. I here give only the percentages :—

Pargana.	Total revenue-paying area.	Percentage of area. Barren	Percentage of area. Culturable.	Percentage of area. Cultivated. Irrigated.	Percentage of area. Cultivated. Dry.	Percentage of area. Cultivated. Total.	Percentage of cultivated. Irrigated.	Percentage of cultivated. Dry.
	Acres.							
Itimádpur ...	134,460	18	9	52	21	73	71·3	28·7
Firozabad ...	129,926	23	7	59	11	70	84·7	15·3
Pináhat ...	180,083	35	9	13	43	56	22·5	77·5
Fatehabad ...	132,139	22	10	39	28	68	57·3	42·7
Agra ...	106,281	16	10	51	23	74	69·1	30·9
Irádatnagar ...	101,750	11	12	48	29	77	61·9	38·1
Farah ...	125,437	9	13	38	40	78	48·5	51·5
Fatehpur Sikri ...	103,681	6	16	39	39	78	50·1	49·9
Khairagarh ...	138,281	12	24	25	39	64	39·7	60·3
District ...	1,152,238	18	12	39	31	70	55·	44·

Thus the remarks on the agricultural features of the different parganas, considered in entirety, and the advantages or disadvatages they severally possess, apply equally to those portions of them which pay revenue.

The revenue-free area.

90. The total area which does not pay revenue to the State (see statement, C. page 50) is 61,707 acres. Its details from an agricultural point of view are shown in that statement. It is however divisible fiscally into three classes, which comprise the following areas :—

		Acres.
(1)	Area over which the muáfidars possess full proprietary rights exempt from payment of revenue—	
(a)	Entire mahâls	29,455
(b)	Revenue-free patches in revenue-paying mahâls ...	2,458
(2)	Area over which the muáfidars are only assignees of the revenue which is paid to them by the proprietors	29,794
	Total ...	61,707

Changes since last settlement in the distribution of the cultivated area amongst the various classes of occupants.
Occupancy tenants

91. The extent to which the distribution of the cultivated area amongst the chief classes of occupants has been modified since last settlement, and the direction which the changes in it tend to take, may be gathered from the statistics given in the statement on page 57. Occupancy tenants have for the most part held their own, but without gaining much ground, except to a certain extent in the Agra pargana, and still more in Pinâhat. The only parganas where they have fallen back are the two across the river. With respect to Itimâdpur the Settlement Officer remarked :—"The change for so long a period as 36 years is slight, and this condition of the pargana points to a very satisfactory state of relations between tenant and proprietor, which at present no doubt exists. Maurusi and ghair-maurusi rights are not 'burning questions' as in Aligarh. Where the tenants are entitled to occupancy rights, the proprietor for the most part admits the claim. Many of these maurusis have held for periods, many since last settlement." In reporting on Firozabad, however (where the decrease was much more marked) Mr. Benson writes :—"The decrease in occupancy tenancy and the corresponding increase in tenancy-at-will is remarkable. No doubt, now that the legal consequences of a right of occupancy are so clearly defined, landlords are much more careful as to admitting any claim to occupancy rights, and strictly contest all claims, even where the tenants are old resident cultivators, if they can discover a flaw in title on succession. The enactment of a strict legal code merely destroys all the mutual trust and good faith formerly existing between landlord and tenant, causes increased litigation and embitters feeling, and, judging from results, has not improved the tenants' position as a body. At last settlement, in the Kotla taluka 91 per cent. of the tenants were recorded as 'maurusi' and 8 per cent. 'ghair-maurusi.' At the present time the proportions are far different, the zamindar being powerful and having taken every means in his power to prevent the growth of right of occupancy under Act X. of 1859." In Pinâhat (where the area held with a right of occupancy has increased very much) it was reported that "the struggle between proprietor and tenant regarding occupancy rights has had no existence. The two parties are on thoroughly good terms at present; and the attestation of the new records gave rise to few disputes." The condition of the remaining parganas in this respect goes to confirm this view of the case. It may be concluded then that the circumstances of Firozabad are peculiar, and it is probably owing to the proceedings of the Kotla taluqdar that that pargana presents such a contrast to the rest of the district. Nor is it unnatural that there should be this contrast. Agra is essentially a district of villages held by proprietary bodies, as opposed to single owners. Such bodies are always slower to move, and have not sufficient unanimity to carry out any sustained measures for preventing the acquisition of occupancy rights by mere length of possession; and up to the present time it is certainly true of the district generally that this question of occupancy is not one that has given rise to much litigation or ill will between the zamindars and their tenants:—

Statement showing the changes in the distribution of the cultivated area since last settlement.

Pargana.	Sir.		Occupancy tenants.		Tenants-at-will.		Remarks.
	Last settlement.	Present settlement.	Last settlement.	Present settlement.	Last settlement.	Present settlement.	
Itimádpur ...	28·5	21·6	63·2	57·1	8·3	21·3	These figures give the percentage of the cultivated area of each pargana occupied by each of the three classes. The small area now held free of rent or at privileged rates, (in all only 2·2 per cent.), has, for the purposes of this statement, been included under the heading of occupancy tenants.
Firozabad ...	12·6	9·5	77·4	62·5	10·0	28·0	
Pináhat ...	51·2	23·0	37·4	54·9	11·4	22·1	
Fatehabad ...	30·5	19·8	55·5	58·5	14·0	21·7	
Agra ...	41·2	29·0	45·9	55·3	12·9	15·7	
Irádatnagar ...	38·0	22·8	52·0	58·0	10·0	19·2	
Farah ...	34·5	24·4	50·0	52·9	15·5	22·7	
Fatehpur Sikri ...	41·5	33·2	42·0	44·6	16·5	22·2	
Khairagarh ...	53·0	29·7	38·0	41·8	9·0	28·5	
District ...	36·5	23·5	51·7	54·1	11·8	22·4	

92. The decrease in the area recorded as "sír" is marked and almost universal. To some extent this is only nominal, being due to a more accurate system of record, under which land held by tenants and hitherto wrongly recorded as "sír" and sublet has now been placed under its proper heading. But there has also been a very real decrease, and this has been ascribed to two causes—(1) the transfer of proprietary rights to non-resident and non-cultivating owners, reducing the cultivating village communities to the status of tenants; and (2) the increasing competition for land resulting from the increasing population, which renders it "more profitable to the zamindar to lease some of his land and to confine his own farm to smaller areas." The increase in the area held by tenants-at-will has of course kept pace with the decrease in the "sir" area, and is the result of the same economic causes. Sír holders. Tenants-at-will.

93. The statement on page 58 contains all the facts from which a judgment may be formed of the manner in which the cultivated area is distributed amongst the different classes of cultivating occupants, their relative importance, and the variations in their condition in the different parganas. The cultivating body consists of four main classes, (1) proprietors, (2) occupancy tenants, (3) tenants-at-will, (4) rent-free holders. Of these, by far the most part important, whether we look to the extent of land they occupy or their actual numbers, are the occupancy tenants. The area occupied by this one class over the whole district amounts to rather more than the area cultivated by the other three classes together, being 52·1 per cent. of the whole. The remainder is almost equally divided between proprietors and tenants-at-will, a small area (only 2 per cent.) being held rent-free. The proportions of the distribution vary of course from pargana to pargana. In Firozabad occupancy tenants have possession of three-fifths of the area, while in Fatehpur Sikri and Khairagarh they hold only two-fifths. They have been enabled to obtain so large a share in Firozabad owing to the small amount of the land cultivated by proprietors; exactly the reverse is the case in Fatehpur Sikri, where the zamindars themselves farm so large a proportion of their lands. If we look only to the area occupied by tenants, we find that the two classes of tenants divide it in the proportions shown in the margin. From that table it appears that 7 out of every 10 acres is held with a right of occupancy. The only important exception to this general rule is Khairagarh, where the right of occupancy is not nearly so widely extended. In Agra we have the opposite extreme, tenants-at-will holding a smaller proportion both of the whole cultivated and also of the tenant-held portion of it than they do in any other pargana. Distribution of the cultivated area at present time.

Pargana.	Percentage of tenant-held land cultivated.	
	By occupancy tenants.	By tenants at will.
Itimádpur ...	72	28
Firozabad ...	68	32
Pinahat ...	70	30
Fatehabad ...	72	28
Agra ...	77	23
Farah ...	70	30
Irádatnagar ...	75	25
Fatehpur Sikri ...	66	34
Khairagarh ...	55	45
District ...	70	30

Statement showing (1) the average size of the holdings; (2) the percentage of the cultivated area held; and (3) the rent rate paid by each class of cultivating occupants.

	Proprietors.					*Occupancy tenants.*					*Tenants-at-will*			Rent-free area.	*Total area held by tenants.*	
	Per cent of cultivated area.	Average area held as sir.	Held with a right of occupancy.	Held as tenants-at-will.	Total average holding of a proprietor.	Per cent. of cultivated area.	Average area held with a right of occupancy.	Rent-rate.	Held as tenants-at-will.	Total average holding of an occupancy tenant.	Per cent. of cultivated area.	Average area held.	Rent-rate.		Per cent. of cultivated area.	Rent-rate.
		Acres.	Acres.	Acres.	Acres.		Acres.	Rs. a. p.	Acres.	Acres.		Acres.	Rs. a. p.	Per cent.		Rs. a. p.
Itimádpur	21·6	13·0	1·8	1·1	15·9	55·5	15	3 8 1	0·2	15·6	21·3	10·7	4 2 2	1·6	76·8	3 10 11
Firozabad	9·5	10·0	1·0	0·3	11·3	60·0	10·9	3 15 5	1·3	11·2	28·0	9·1	4 13 5	2·5	88·0	4 3 10
Pináhat	23·0	6·0	0·9	0·6	7·5	52·3	6·2	3 11 8	0·2	6·4	22·1	6·0	4 5 3	2·6	74·4	3 14 10
Fatehabad	19·8	11·9	2·0	0·8	14·7	57·0	8·8	3 7 0	0·4	9·2	21·7	5·9	3 11 9	1·5	78·7	3 8 5
Agra	29·0	9·4	1·6	0·7	11·7	53·6	6·6	4 2 9	0·3	6·9	15·7	4·5	4 13 11	1·7	69·3	4 5 9
Irádatnagar	22·8	13·6	2·7	0·9	17·2	56·2	8·1	4 4 10	0·4	8·5	19·2	5·7	4 13 9	1·8	75·4	4 7 1
Farah	24·4	11·4	1·3	0·6	13·3	51·2	7·1	3 4 1	0·9	8·0	22·7	4·8	3 7 3	1·7	73·9	3 5 1
Fatehpur Sikri...	33·2	11·3	1·2	0·9	13·4	42·5	6·3	4 1 2	0·8	7·1	22·2	4·4	4 5 1	2·1	64·7	4 2 6
Khairagarh	29·7	8·4	1·5	1·4	11·3	39·7	4·6	3 8 11	0·3	4·9	28·5	4·3	3 13 1	2·1	68·2	3 10 0
District	23·5	9·7	1·2	0·8	11·7	52·1	7·7	3 12 9	0·4	8·1	22·4	6·0	4 3 4	2·0	74·5	3 14 0

NOTE.—The area held by privileged tenants is, in this statement, included in the area held by occupancy tenants. It amounts to only 0·2 per cent. of the total cultivated area.

Average size of holdings.

94. The average area in each holding farmed by a proprietor as his sír is 9·7 acres; by each tenant-at-will 6 acres. But proprietors also cultivate lands in the capacity of tenants with or without a right of occupancy, which distributed over the number of original proprietors holdings add 1·2 acres held *with*, and 0·8 acres *without* that right, and make the total average holding of a proprietor 11·7 acres. Similarly, occupancy tenants cultivate some lands over which they have not that right, the average being 0·4 acres to a holding, so that their holdings altogether average 8·1 acres. Irádatnagar is remarkable for the largeness of the holdings of the proprietors, and Itimádpur also, but to a less degree. In this latter pargana as well as in Firozabad the tenants' holdings also are much larger than in the rest of the district; the reverse is the case in Farah and Khairagarh, where they are exceedingly small. In Pináhat and in Khairagarh the occupancy tenant cultivates but little more land than a tenant-at-will, whereas in Itimádpur and Farah the proportion is as 3 to 2. The wide difference in the size of the holdings is very striking, and certainly indicates a great disparity in the condition of the tenants.

95. The occupancy tenant in the Itimádpur holding over 15 acres must undoubtedly be in a very different position from his fellow in Khairagarh who has less than 5 acres on which to live, especially as the latter has no advantage over the former in having better land to work on. It is difficult to find any test whereby to estimate the relative position of the tenants in different parganas, so as to allow for the two elements, the quantity and the quality of the land which he cultivates. In default of any better method of appraising the quality I have calculated the rental of an average occupancy tenant holding at the average rent-rates at which the pargana was assessed with the following result:—

Pargana.	Area of average holding.	Average rent-rate of pargana			Rent calculated at that rate.		
		Rs.	a.	p.	Rs.	a.	p.
Itimádpur	15·6	4	5	7	67	13	0
Firozabad	11·2	5	0	0	56	0	0
Pináhat	6·4	4	3	0	26	12	0
Fatehabad	9·2	4	6	4	40	7	0
Agra	6·9	5	2	2	35	7	0
Irádatnagar	8·5	5	2	0	43	9	0
Farah	8·0	3	12	3	30	2	0
Fatehpur Síkri	7·1	4	8	9	32	4	0
Khairagarh	4·9	4	2	4	21	2	0

Rates of rent paid by the various classes.

96. As occupancy tenants hold so large a share of the land the rents paid by them go far to determine the assets of the zamindars, and their incidence is thus of considerable importance. The general rate they pay over the whole district is Rs. 3-12-9 an acre (about Rs. 2-2 the bigha), and the limits of its variation are from Rs. 3-4-1 in Farah to a maximum of Rs. 4-4-10 in Irádatnagar. Considering the causes that have been at work (as will be shown hereafter) to keep the rents of these privileged tenants unchanged, it is desirable to ascertain whether these variations arise solely from a difference in the land, or whether rents are really higher in some parts of the district than in others. One test is to compare the rate with that paid by tenants-at-will in the same pargana, the latter being presumably to a great extent determined by competiton and the actual value of the land. I have therefore calculated the difference per cent. of the occupancy rate between it and that paid by tenants-at-will; it is as follows:—

In Itimádpur ...	18 per cent.	In Irádatnagar ...	13 per cent.
„ Firozabad... ...	22 „	„ Farah	6 „
„ Pináhat	15 „	„ Fatehpur Síkri ...	5 „
„ Fatehabad ...	11 „	„ Khairagarh ...	7 „
„ Agra	21 „	Throughout the district...	11 „

But unless there is a very great superiority in the occupancy holdings, the net result of the immunities enjoyed by the occupancy tenant, as far as the amount of his rent is concerned, is really very small. The average tenant with his holding of 8 acres pays only Rs. 3-5-4 less than he would as a tenant-at-will. North of the Jamna the difference indeed is greater, being as high as Rs. 9-12-0; but in Khairagarh it

would be only Re. 1-4-0, in Farah Re. 1-8-0, and in Fatehpur Sikri Rs. 2-3-0. There is, I think, no doubt that the comparative prosperity of the occupancy tenants as compared with the tenant-at-will depends less on any leniency in the rent he pays than on the fact that he is not liable to arbitrary ejectment, and that his rent is not liable to frequent enhancement, and is due to the fixity of tenure rather than to the lowness of the rent. The law already provides sufficiently for the maintenance and possession of his holding; and these facts seem to argue that if it should seem necessary to do anything more in his behalf, it should rather be in the direction of lengthening the period for which he is exempt from enhancement than by keeping his rent below the standard at which a free competition would maintain it. There is, I think, much to be said in favour of exempting this class of tenant from enhancement within the term for which the land revenue is fixed—in other words, giving them leases for that term. This is what was done in this district at last settlement, and was acquiesced in by the zamindars without any demur.

Security of tenure under right of occupancy.

97. Some idea of the comparative security of the tenures of occupancy tenants and of tenants-at-will may be formed from the following statistics. They were drawn up in this way: three villages with an aggregate area of about 1,500 acres were taken in each Canúngo's circle, and from a comparison of the records of the revision of settlement in 1853 with those of 1877 it was ascertained to what extent the two classes of tenants had kept or lost possession of their holdings within those 24 years. It was impossible to obtain these statistics for the whole of the parganas, or indeed for any villages in some of them, as the records of 1853 have to a great extent been lost:—

		Firozabad.		*Fatehabad.*		*Fatehpur Sikri.*		*Khairagarh*		*Total.*	
		Holding.	Area.	Holding.	Area.	Holding.	Area.	Holding.	Area.	Holding.	Area.
			Acres.		Acres.		Acres.		Acres.		Acres.
Occupancy tenants who held in 1853.	(a) Still cultivating	98	964	192	1,749	427	3,755	204	1,448	921	7,916
	(b) Who have lost their holdings.	27	252	53	410	128	1,259	110	1,078	318	2,999
Tenants-at-will who held in 1853.	(c) Now cultivating as occupancy tenants.	23	172	34	590	240	1,600	22	94	319	2,456
	(d) Who have lost their holdings.	49	324	53	420	209	659	49	258	360	1,661
	Total ...	197	1,712	332	3,169	1,004	7,273	385	2,878	1,918	15,032

Of the 1,239 holdings in the hands of occupancy tenants in 1853, comprising an area of 10,915 acres, 318 holdings (about one-fourth) have passed out of their hands: while of the 679 holdings and 4,117 acres that were held by tenants-at-will, more than half the holdings and two-thirds of the area have been lost by them. It is also worth noting that the 318 holdings which were lost to old occupancy tenants have been replaced by 319 holdings in which occupancy right have been acquired under Act X. of 1859; and that 80 per cent. of the area now held by occupancy tenants is in the hands of old occupancy tenants, 20 per cent. only by those created by Act X.

The rise in rent-rates.

98. When the question is discussed to what extent the rent-rate has risen since last settlement, it is necessary to lay down clearly in what sense the term 'rent-rate' is to be used. Is it to mean the average rate of the rental actually paid by the tenants as a body, or is it to signify the letting value of the land as indicated by the rents paid for it, only when competition is allowed full sway? The distinction is a real one, and in this district especially is of considerable importance. Taking the term in the former of these senses the answer would be comparatively an easy one, but of little value. But when it is sought to ascertain the rise in the true letting value of the land, the enquiry becomes both important and at the same time more difficult to satisfy. The reason is this, that in this district the measures adopted at last settlement with regard to the rents of occupancy tenants have altogether prevented their

Fixation of the rents of occupancy tenants at last settlement.

rising in any proportion to any increase in the value of the land, to whatever extent that may have taken place.

I quote from the Itimádpur rent-rate report:—"In his settlement report Mr. Mansel explains how he formed the patoti or engagement between the zamindars and asamis with regard to the rental the latter were to pay. His Deputy Collector fixed the jamabandi of each village on the general principle of allowing the zamindars to collect from old resident asamis a rental averaging about one-half more than the Government jama. This object was to protect all old asamis, and he adds that under the patoti the power of ouster or advance of rent even by a civil action is precluded to the zamindar so long as the asami pays his proper rent and claims to keep his holding. Mr. Gubbins followed in the footsteps of Mr. Mansel, and his revision of records still further stereotyped rents. The great bulk of the occupancy tenants of the pargana are not the creation of the 12 years' rule of Act X. of 1859, but are the old asamis spoken of by Mr. Mansel, whose rents have been unchanged since settlement. When it is remembered that at last settlement tenants of this kind occupied 63¼ per cent. of the area, at first sight the wonder is, not that so little rise has occurred, but that any perceptible increase has taken place at all." No doubt, as the settlement officer went on to show, many causes tended to lessen the ranks of the protected tenants and to give the landlords opportunities of evading the disabilities imposed on them by this arrangement, and the inclusion in the body of occupancy tenants of former tenants-at-will who have more lately acquired a right of occupancy has allowed the rent-rate paid by those tenants as a body to rise. Still, in default of any guide as to the extent to which these modifying causes have been at work, it is impossible to say how far that rent-rate has been kept down by the fixity of the old rents, or how far it has risen in spite of it. The practical conclusion, however, is clear enough: the rents paid at the present day by the occupancy tenants cannot be accepted as a standard by which to measure the rise that has taken place in the value of the land during the last 35 or 40 years. The only standard left is that furnished by the rents paid by tenants-at-will.

Rent-rate paid by tenants-at-will as a guide to the value of the land.

99. It may of course be objected that these rents are liable to become rack-rents, but there certainly is no evidence to warrant such a conclusion in this district, and the fact that the rates they pay are only 11 per cent. higher than the rent paid by the occupancy tenants is at least negative evidence to the contrary. Moreover, the undoubted fact that the lands they cultivate form the least fertile portion of each village will fully justify the assumption that the rate they pay is not an exaggerated estimate of the general value of the land, if it cannot be shown to be unduly low. Perhaps the more serious defect in this test lies in this, that the area held by them amounts to so small a proportion (only 22½ per cent.) of the total cultivated area, rendering any conclusion based on the statistics of such a limited portion of doubtful applicability to the district generally; whatever error this may cause will be in the direction of under rather than over estimating the average rent-rate. In spite of all these drawbacks, however, it is clear we have no other test at our disposal; I shall therefore quote the average rate paid by tenants-at-will as the present rent-rate. The rate of last settlement has been deduced from the revenue-rate then assessed—a fair deduction, considering the method which was then adopted for fixing the rents. The table in the margin shows the rent-rates of the two dates and the increase as measured by comparison of them, amounting for the district as a whole to 32 per cent. The revenue of last settlement was assessed at two-thirds

Pargana.	Rent-rate of last settlement.			Rent-rate now paid by tenants-at-will.			Increase per cent.
	Rs.	a.	p.	Rs.	a.	p.	
Itimádpur ...	3	0	5	4	2	2	36
Firozabad ...	3	6	7	4	13	3	44
Pináhat ...	2	11	7	4	5	3	59
Fatehabad ...	3	1	9	3	11	9	20
Agra ...	3	10	6	4	13	11	33
Irádatnagar ...	3	10	10	4	13	9	32
Farah ...	2	14	1	3	7	3	20
Fatehpur Síkri...	3	8	7	4	4	11	22
Khairágarh ...	2	12	2	3	13	1	25
District ...	3	2	8	4	4	1	32

of the rental assets; the proportion has at the present revision been reduced to one-half. This rise of 32 per cent. in the *rent-rate*, together with the increase of 4½ per cent. that has taken place in cultivation (*vide* page 47), would be sufficient to raise the rental assets high enough to maintain the former revenue unchanged, but *would not* admit of any increase in the demand. The revenue has however been raised in every pargana. How is this justified?

Rise in rent-rates as estimated by the assessing officers, and comparison of the rentals at assumed rates with the actual rentals.

(1) Itimádpur.

100. The investigations of the assessing officers led them to the conclusion that the real rise in the rents was even greater than that which would be indicated by the comparison instituted above. I will quote their own language on the subject. In his report on Itimádpur the late Mr. Smith wrote :—"Rents have increased in many villages which have been gradually freed from the trammels formerly imposed on them, and it is possible to apply the conclusions drawn from these to the cases of other villages, where the conditions of agricultural progress are the same, but where rents have been immovable in consequence of official action. I myself analyzed the history of a large number of estates and selected 33 where the rentals of the last 16 years showed that the rise had been gradual and progressive, and where a knowledge of the past circumstances of the village proved that it was normal and not the result of rack-renting. The villages are of all classes ; some in the ravines, some in the best parts of the pargana ; some were lightly, some heavily assessed, and the increase in irrigation has been about average; but in all the rents have been moving gradually. At last settlement the cultivated area was 17,482 acres, and the estimated rental Rs. 46,760. The cultivated area has increased very little and is now only 18,664 acres. The rent-rate was Rs. 2-10-9; it is now Rs. 4-0-10. The rate has increased 51 per cent. I believe this to be a probable approximation to the real rise in rents; a little perhaps above the real increase, as more of these villages were no doubt assessed lightly than heavily. I should myself place the rise between 40 and 50 per cent. Independent enquiries in the adjoining pargana of Firozabad lead to much the same result there. The conclusions I deduce are that I should be justified in imposing a rent-rate on the cultivated area somewhere between 40 and 50 per cent. above that of last settlement, and that rents adopted accordingly would not be rack-rents." The rental of the pargana based on this officer's assumed rates did accordingly involve the assumption of an increase of 42 per cent. in the rental value of the land.

(2) Firozabad.

101. Mr. Benson, who assessed Firozabad after a detailed analysis of the rentals (*vide* pages 43, 44 of his report) comes to this conclusion : "To sum up, a comparison of the assumed rental of last settlement and present corrected rental shows an undoubted rise in the recorded rental of 27 per cent. over the whole pargana; but that this in any way represents the real rise in rental has been completely disproved both on general considerations and from the instance of the Kotla ilaka, where rents have had free play, and have risen 49 per cent. Selected cases, too, in other villages show a possible increase of 45 per cent. On the whole, then, it may safely be concluded that the rental value of lands has risen since last settlement between 40 and 50 per cent. and is at present rising rapidly ; while I think it as well to mention that a detailed examination of the rent-rolls of the estates in the pargana has completely convinced me that as yet nothing like the full rent which it is possible for a tenant to pay is taken, as a rule, by the landlord; competition has not taken the place of custom in determining the rent, and rack-renting is utterly unknown." The rates assumed by this officer pointed to an increase of 47 per cent.

(3) Fatehabad.

102. In Fatehabad Mr. Smith found reason to doubt the accuracy of the village papers, and with this the accuracy of the rent-rate represented as paid by tenants-at-will. For this reason he was forced to select those villages in which there was no suspicion of concealment of assets, and he proceeds as follows:—"Only in selected villages is this found to be the case, and it is from these that conclusions as to the actual rise in rents may be derived with some approximation to accuracy. Of the total number of

villages I found 28 with an area of 16,168 cultivated acres, or 18 per cent. of the total cultivation, available for this purpose. They are of all kinds and classes: many in the ravines, some on the best upper land. As in the pargana, as a whole, irrigation had decreased, and cultivation had increased by only 4 per cent. The estimated rental at last settlement was Rs. 37,585, with a rental rate of Rs. 2-6-1 per acre. The corrected rental is now Rs. 58,730, with a rate of Rs. 3-10-1; assets having thus increased by 56 per cent. and the rent rate by 50 per cent. The general rise, however, will be less than this. The majority of the estates selected, though by no means all, are situated among or near the ravines, and the tendency of Mr. Mansel's system of village and soil classification by 'chaks' was towards the imposition of a comparative light revenue, and the assumption of rather low assets, for these estates. Some allowance must be made on this head, and it will not be far wrong to assume that the actual rise has been somewhere about 40 per cent." The rates he finally fixed involve an increase of 41 per cent.

103. Mr. Benson met with the same difficulty in the Agra tahsil. He says: "It is to be doubted in many cases whether enhancements have been recorded as they have taken place. Indeed, the trustworthiness of the recorded rental, as a whole, is doubtful. In many villages it is only by looking at shikmi (so called) rents that real rates can be ascertained, and in others not even these are correctly recorded. In some villages the zamindars manage things entirely in their own fashion, paying no heed to the patwári or to Government officials generally." His soil rates assumed a rise of 41 per cent, which he considered "fully justified by the general progress of the pargana, the rise in the market value of land, and in prices," and, I may add, by the analogy of the other parganas. In Irádatnagar Mr. Smith reports: "I have as usual taken the rates acknowledged to be, and recorded as prevalent in selected villages, as a guide to, and test of the results of my own investigations. Out of 128 villages composing the pargana, I found 48 in which rents had not been stationary, which nevertheless had not been rack-rented, and where there was no suspicion of fraud and concealment. The cultivated area at last settlement was 22,360 acres, and the estimated rental Rs. 81,384, so that the rent-rate was Rs. 3-10-3, differing only by a few pies from the general rent-rate of the pargana. The present cultivated area of the same villages is now 22,617, and the corrected rental Rs. 1,15,998, while the rent-rate is Rs. 5-2-1, involving a rise in rent of 41 per cent." This is in exact accordance with the results of the proposed rent-rates. (4). Agra. (5). Irádatnagar.

104. In the three remaining parganas the rise has been much smaller. In Farah the assumed rise was only 31 per cent. "the physical disadvantages under which that sub-division labours seeming sufficient to account for the smallness of the rise as compared with other parganas." The accuracy of the soil rates was verified by the test of the crop rates current in a large number of villages. (6) Farah.

105. In Fatehpur Sikri the assumed rise was still lower, only 29 per cent.; the average incidence of the soil rates being only Rs. 4-8-9, very little above the tenant-at-will rate. There was in fact much less room for a rise in rents in this pargana, the rents fixed at last settlement being out of all comparison far heavier in it than in any other pargana; for "the rental then was higher than in other parganas such as Firozabad, and nearly as high as in Irádatnagar and Agra, a proportionate increase was, therefore, impossible, and would have raised the rent to a standard far beyond the capabilities of the pargana." Th[illegible] the present recorded rents are also high, in comparison with those paid in much m[illegible] fertile parts of the district, sets aside all suspicion of any extensive concealment of [illegible] (7) Fatehpur.

106. In Ki[illegible]arh, where the rate now paid by tenants-at-will would prove a rise of only 25 p[illegible], the rates I adopted would require for their justification an increase of 35 per [illegible] The difference is, I submit, not greater than is warranted by a comparison with [illegible]rs of inquiries in the rest of the district. Moreover, it was only in the southern [illegible] the pargana that my rates involved a greater increase than was actually called [illegible] rate paid by tenants-at-will. My reasons were that, in the (8) Khairagarh.

first place, tenants-at-will paid practically the same rate as occupancy tenants, from which I argue that the lands they hold must be very much inferior; and as the peculiarity of that tract is the great difference in fertility that separates the poorer from the better lands, the rate they pay is very much more inadequate as a measure of the value of the land than is the case in any other pargana where the land is more uniform. In the second place, a large portion of the so-called tenants-at-will are sharers, cultivating the lands of their brethren, and their rents are not much more genuine than the rents of the sír land. Lastly, the crop rents, actually paid, fully bear out the rates I proposed (*vide* page 46, Khairagarh Report).

(9) Pináhat.

107. I have left to the last the case of pargana Pináhat, as it is peculiar in being the only pargana in which a smaller rise in rates has been assumed than would be justified by the test of the rate paid by tenants-at-will, which pointed to a rise of 59 per cent., very much greater than was the case in any other pargana. One reason for this, as explained by the assessing officer, was that the records were here found to be more accurate than elsewhere (*vide* page 44, Pináhat Report). But the characteristic of the tract which, though not mentioned by the Settlement Officer in this connection, I believe rendered it impracticable to assess as high as the rates paid by tenants-at-will, was the great uniformity of the soil. The case is precisely the reverse of that of South Khairagarh just mentioned. Here (as will be fully explained) the home lands are but little better than the outlying, the irrigated lands little more valuable than the dry, and consequently the lands occupied by the tenants-at-will cannot be much poorer than the rest of the cultivated area, so that the rate they pay would be comparatively a much higher rate to be applied to the whole area than where, as in South Khairagarh, the lands they hold are very inferior to the rest of the cultivated land. There were thus good grounds for the adoption of such different procedure in the case of these two tracts.*

Average rate of assumed rents.

108. The result of these independent inquiries in the nine different parganas with all their varying characteristics led to the adoption of soil rates, giving a total rental of Rs. 36,11,612, falling at an average rate of Rs. 4-8-0, thus assuming a rise in the rental value of land amounting to Rs. 1-5-4 per acre, or 42 per cent. above the rent rate of last settlement, which was Rs. 3-2-8. This assumed rise, as I have shown, varies between minimum of 29 per cent. in Fatehpur Síkri to a maximum of 55 per cent. in Pinahat.†

* With reference to this point see further the note given at the end of Part III., page 78.

† NOTE.—The subjoined statement shows in a concise form how far, and in what direction, the rentals of the different parganas, calculated at the rates assumed for assessment, vary from the recorded rentals, and those rentals corrected at the rates paid by tenants only :—

Pargana.	(1) Recorded rental.	Corrected rental. (2) *At general tenant rate.*		(3) *At rate paid by tenants-at-will only.*		(4) Rental at assumed rates.	
		Rate.	Rental.	Rate.	Rental.	Rate.	Rental.
	Rs.	Rs. a. p.	Rs.	Rs. a. p.	Rs.	Rs. a. p.	Rs.
Itimádpur	3,42,302	3 10 11	3,62,668	4 2 2	3,87,296	4 5 7	4,28,258
Firozabad	3,64,951	4 3 10	3,71,473	4 13 5	4,37,115	5 0 0	4,52,751
Pináhat	3,09,259	3 8 6	3,13,252	3 11 9	3,33,386	4 6 4	3,92,584
Fatehabad	3,22,556	4 5 9	3,44 205	4 13 11	3,86,818	5 2 2	4,11,220
Agra	3,31,470	4 7 1	3,46,692	4 13 9	3,79,205	5 2 10	4,04,257
Irádatnagar	3,01,532	3 5 1	3,25,702	3 7 3	3,38,761	3 12 3	3,70,571
Farah	3,06,162	4 2 6	3,36,457	4 5 1	3,49,506	4 8 0	3,68,556
Fatehpur Síkri ...	3,16,156	3 10 0	3,26,236	3 13 1	3,43,861	4 2 4	3,67,403
Khairagarh							
District	29,57,184	3 14 0	31,16,682	4 3 4	33,85,662	4 7 10	36,11,612

Excess of (4) over (1) 22 per cent.; over (2) 16 per cent.; over (3) 6¾ per cent.
" (3) " 11 " ; " 8 "
" (2) " 5½ " ;

109. The crop statements in the following pages have been drawn up to meet two objects ; firstly, to show the character of the crops and the cultivation in the different parganas and parts of the district, and to afford such evidence as this gives with regard to their fertility and system of agriculture ; and, secondly, to provide an accurate estimate of the areas occupied by the diffent crops as a basis for comparison with future years. With a view to the first object, inasmuch as the assessment of the district was carried out by parganas as arranged under the old distribution, the following table has been compiled showing the percentage of the cultivated area occupied by the principal crops in the old parganas at the present settlement. For the second purpose detailed statements have been compiled in accordance with the new distribution of the parganas, which are given later on:— Crops.

Statement showing the percentage of the cultivated area of each pargana occupied by the principal crops.

Parganas (former distribution).	Himádpur.	Firozabad.	Pináhat.	Fatehabad.	Agra.	Irádatnagar.	Farah.	Fatehpur Sikri.	Khairagarh.	District.
Crops.										
Juar	21	21	15	14	30	26	29	26	25	22.7
Bajra	13	13	34	26	9	12	8	7	16	18.3
Cotton	21	17	13	14	12	15	12	13	14	14.7
Sugarcane	1	1	1	1	½	1	1	0	1	0.7
Indigo	1	2	0	0	½	0	0	1	0	0.4
Maize	1	4	0	0	0	1	0	0	0	0.9
Moth, &c	1	1	1	3	3	4	6	3	8	3.1
Miscellaneous	1	1	1	2	1	1	2	2	2	0.8
Total kharif ...	60	60	65	60	56	60	59	52	66	61.6
Wheat	15	17	8	9	16	15	11	19	11	11·6
Barley and wheat-barley ...	6	9	1	2	3	4	7	7	5	4·8
Bejhar and gochani	15	15	23	21	16	11	11	14	9	16 5
Gram	3	3	9	5	10	10	11	13	21	8·3
Oilseeds	3	1	0	1	1	0	1	0	0	0·8
Miscellaneous	1	1	1	1	2	2	2	2	1	6·1
Total rabi ...	43	46	37	42	48	42	43	55	47	43.1
Double-cropped area ...	3	6	2	2	4	2	2	7	13	4 7

From this statement it appears that in five out of the nine parganas the kharif crop covers just three-fifths of the cultivated area. This proportion is exceeded in the two exceptional tracts, Pináhat and Khairagarh, where it rises to two-thirds, owing of course to the scantiness of their irrigation. The only pargana where it falls much below the general average is Fatehpur Síkri, where it is barely more than half; the reason for which is it to be found in the existence to the west of the pargana of a large area of land, flooded every rains, which grows nothing but rabi crops. The area under rabi consists of the area unsown for the kharíf harvest, added to the limited area that grows a second crop that same year. The extent of this double-cropped area varies very greatly, being as low as 2 to 4 per cent. in most of the parganas, while it is as high as 13 per cent. in Khairagarh. Accordingly Pináhat with its large kharíf area and but little double-cropping shows the smallest area under rabi, only 37 per cent. Fatehpur Síkri on the other hand, with a small kharíf area and a considerable extent of double-cropping, has the maximum area under rabi, *viz.*, 55 per cent. Thanks to the large amount of land growing a double crop, Khairagarh, in spite of its large kharíf area, has also more than the average of land growing rabi.

110. With regard to individual crops the extent of cotton in the Trans-Jamna parganas is remarkable. In Pináhat and Fatehabad bajra is the chief kharíf crop ; elsewhere it is juar. Amongst the spring crops it will be observed that where cotton and juar are the chief autumn crops, wheat and barley are most commonly grown in rabi, while the prevalence of bajra in the first harvest is coupled with large areas under bejhar and gram in the second. The variation follows more or less closely the extent of irrigation. The more there is of irrigation, the larger will be the proportion of cotton or juar in the kharíf, and of wheat or barley in the rabi harvest: as irrigation falls off bajra becomes more common in the former, and gram and bejhar in the latter.

General Crop Statement A.—showing the area under each crop at the two harvests in each pargana.

Kharif crops.	Itimádpur.	Firozabad.	Pináhat.	Fatehabad.	Agra.	Fatehpur Síkri.	Khairagarh.	District.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
uar	21,253	19,163	18,228	19,920	28,886	32,220	33,633	1,73,303
Chari juar ...	95	287	49	64	103	3,591	1,036	5,225
Bajra	12,959	11,673	39,797	27,610	11,408	16,507	23,592	1,43,546
Cotton	20,093	15,337	15,961	14,733	11,577	18,955	19,206	1,15,862
Sugarcane ...	717	918	693	1,115	647	877	898	5,865
Indigo	1,141	1,578	44	9	442	77	7	3,298
Maize	1,231	4,095	17	446	357	289	323	6,758
Kangni	33	56	384	139	316	322	146	1,396
Rice	42	246	3	17	7	179	29	523
Marua	8	15	2	1	4	13	4	47
Kurri	...	...	286	13	9	15	12	335
Sawan	...	2	185	...	2	...	...	189
Kodon	3	...	1	...	...	...	...	4
Moth	951	194	1,137	3,190	2,725	2,222	7,693	18,122
Mung	59	26	63	57	98	215	185	703
Mash	284	153	164	123	32	611	731	2,098
Ranwás	...	11	...	15	...	131	...	157
Gowar	286	188	23	71	313	978	207	2,066
Arhar	42	57	226	44	42	97	181	689
Hemp	697	1	199	25	115	85	24	1,146
Castor-oil ...	...	59	12	6	28	6	3	114
Til	6	27	24	54	24	54	37	226
Tobacco	2	...	71	3	18	53	7	154
Garden crops ...	65	12	497	29	558	767	67	1,995
Shakarkand ...	3	...	...	31	20	4	16	74
Kachari	...	...	21	4	7	11	5	48
Total kharif ...	59,970	54,098	78,087	67,719	57,738	78,279	88,042	4,83,933
Do. rabi ...	43,124	41,611	44,090	44,076	42,959	63,189	59,865	3,38,914
Grand Total ...	1,03,094	95,709	1,22,177	1,11,795	1,00,697	1,41,468	1,47,907	8,22,847
Double cropped ...	2,875	4,990	2,009	2,449	3,117	6,689	14,856	36,985
Cultivated area ...	1,00,219	90,719	1,20,168	1,09,346	97,580	1,34,779	1,33,051	7,85,862

Rabi crops.	Itimádpur.	Firozabad.	Pináhat.	Fatehabad.	Agra.	Fatehpur Síkri.	Khairagarh.	District.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat ...	15,273	15,231	3,431	8,492	14,684	19,856	14,143	91,110
Wheat-barley,	1,322	1,910	401	2,639	345	1,896	1,841	10,254
Barley ...	5,391	6,563	525	2,183	2,237	6,915	4,156	27,970
Wheat-gram ...	868	936	2,338	2,237	97	2,964	2,857	12,297
Bejhar... ...	14,092	13,005	25,488	21,969	15,514	15,627	11,643	1,17,338
Gram	2,894	2,246	10,991	4,152	7,993	12,129	22,934	63,339
Pease	26	49	7	315	46	250	671	1,364
Masur	5	...	33	55	6	98	109	306
Chena	...	...	...	61	4	8	...	73
Oilseeds ...	2,787	907	250	1,127	509	391	174	6,145
Tobacco ...	119	153	66	268	57	50	217	930
Jira	...	...	...	...	2	...	351	353
Garden crops...	107	386	75	230	257	816	341	2,212
Carrots ...	98	225	71	275	326	195	161	1,351
Melons ...	95	...	4	19	420	...	...	538
Onions ...	...	...	...	...	16	...	...	16
Mehndi ...	...	...	...	...	...	55	...	55
Safflower ...	25	...	2	...	12	...	...	39
Fallow ...	22	...	408	154	434	1,939	267	3,224
Total rabi ...	43,124	41,611	44,090	44,076	42,959	63,189	59,865	3,38,914

Crop Statement B.—showing the percentage of the cultivated area occupied by the different crops.

Name of crop.	Itimád-pur.	Firoza-bad.	Pináhat.	Fateha-abad.	Agra.	Fateh-pur Síkri.	Khaira-garh.	District.
Kharif.								
Juar ...	21·3	21·4	15·2	18·2	29·7	26·6	26·2	22·7
Bajra ...	12·9	12·9	33·1	25·4	11·7	12·2	17·7	18·3
Cotton ...	20·1	15·9	13·3	13·5	11·9	14·1	14·4	14·7
Sugarcane ...	0·7	1·0	0·6	1·0	0·7	0·6	0·7	0·7
Indigo ...	1·1	1·8	...	...	0·5	0·1	...	0·4
Pulses ...	1·6	0·6	1·4	3·2	3·3	3·2	6·8	3·1
Maize ...	1·2	4·5	...	0·4	0·4	0·2	0·2	0·9
Hemp ...	0·7	...	0·2	...	0·1	...	...	0·2
Garden crops and vegetables...	0·1	...	0·5	...	0·6	0·6	0·1	0·8
Minor cereals ...	0·1	0·4	0·7	...	0·3	0·4	0·1	0·3
Oilseeds ...	...	0·1	...	...	...	0·1	...	...
Total kharif ...	59·9	59·7	65·0	62·0	59·2	58·1	66·2	61·6
Rabi.								
Wheat ...	15·2	16·8	2·9	7·8	15·0	14·7	10·7	11·6
Wheat-barley ...	1·3	2·1	0·3	2·3	0·4	1·4	1·4	1·3
Barley ...	5·4	7·2	0·4	2·0	2·3	5·2	3·1	3·5
Wheat-gram ...	0·9	1·0	2·1	2·0	0·1	2·2	2·1	1·6
Bejhar ...	14·0	14·3	21·2	20·1	15·9	11·6	8·8	14·9
Gram and pease ...	2·9	2·5	9·2	4·1	8·2	9·2	17·8	8·3
Oilseeds ...	2·8	1·0	0·2	1·0	0·5	0·3	0·1	0·8
Garden crops (drugs and vegetables).	0·5	1·0	0·1	0·9	1·1	1·0	0·8	0·7
Fallow ...	..	...	0·3	0·1	0·5	1·3	0·2	0·4
Total rabi ...	43·0	45·9	36·7	40·3	44·0	46·9	45·0	43·1
Total kharif and rabi ...	102·8	105·5	101·7	102·3	103·2	105·0	111·2	104·7
Double-cropped area ...	2·8	5·5	1·7	2·3	3·2	5·0	11·2	4·7

Crop Statement C.—showing the extent to which minor crops are grown with the principal crops.

Kharif.				Rabi.			
Principal crop.	Area in which grown alone.	Area in which mixed with minor crops. Minor crops.	Acres.	Principal crop.	Area in which grown alone.	Area in which mixed with minor crops. Minor crops.	Acres.
Juar ...	69,421 (40)	Arhar ...	43,652	Wheat ...	44,318 (49)	Sarson ...	43,228
		Bajra, hemp, and til.	17,683			Duan and rai,	3,564
		Mash ...	16,916			Total ...	46,792 (51)
		Mung ...	19,501				
		Gowar ...	6,130	Wheat barley.	5,998 (58)	Sarson ...	3,712
		Total ...	103,882 (60)			Duan and rai,	544
						Total ...	4,256 (42)
Bajra ...	92,309 (64)	Arhar, mash...	22,318	Barley ...	14,215 (51)	Sarson ...	11,634
		Arhar, mung, gowar, and til.	6,957			Duan and rai,	2,121
		Moth ...	14,433			Total ...	13,755 (49)
		Gowar, mash, hemp, and til.	7,728	Wheat gram	7,784 (63)	Sarson ...	3,966
		Total ...	51,436 (36)			Duan and rai,	547
						Total ...	4,513 (37)
Cotton ...	56,770 (49)	Arhar ...	32,234	Bejhar ...	88,892 (76)	Sarson ...	25,712
		Juar and hemp,	11,872			Duan and rai,	2,734
		Gowar, moth, hemp, and til.	10,974			Total ...	28,446 (24)
		Mash and hemp,	4,512	Gram ...	50,980 (80)	Sarson ...	10,486
		Total ...	59,092 (51)			Duan and rai,	1,873
						Total ...	12,359 (20)
Total kharif,	218,500		214,410	Total rabi...	2,12,187 (66)	...	110,121 (34)

NOTE.—The figures included in brackets show percentages.

Crop Statement C.—showing the extent to which minor crops are grown with the principal crops—(concluded).

	Alone.	With other crops.	Total.	Oil seeds.	Alone.	With other crops.	Total.
Arhar ...	689	105,161	105,850	Sarson ...	81	98,638	98,719
				Dusn and Rai.	6,064	11,383	17,447
				Total ...	6,145 (5)	1,10,021 (95)	116,166 (100)

NOTE.—The figures included in brackets show percentages.

Crop Statement D.—showing the area under each crop (S.) growing that crop only, and (D.) growing a second crop that year.

Crop.		Itimádpur.	Firozabad.	Pináhat.	Fatehabad.	Agra.	Fatehpur Sikri.	Khairagarh.	District.	Percentage of the area under each crop sown in both harvests.
		Acres.	Acres.	Acres	Acres.	Acres.	Acres.	Acres.	Acres.	
Juar and chari juar.	S.	20,423	16,608	17,509	19,099	27,034	33,333	32,000	166,006	...
	D.	925	2,842	768	885	1,955	2,478	2,669	12,522	7·2
Bajra ...	S.	13,086	11,157	39,055	26,979	11,112	13,880	12,732	127,001	...
	D.	873	516	742	631	296	2,627	10,860	16,545	11·5
Cotton ...	S.	19,414	14,061	15,562	14,249	11,024	18,033	18,307	110,650	..
	D.	679	1,276	397	484	558	922	899	5,212	4·5
Indigo ...	S	959	1,578	44	9	442	32	6	3,070	...
	D.	182	...	...	...	...	45	1	228	6·9
Maize ...	S	1,052	3,887	17	322	239	194	200	5,911	...
	D.	179	208	...	124	118	95	123	847	12·5
Pulses (moth, &c.)	S.	1,543	424	1,287	3,174	3,080	4,111	8,557	22,176	..
	D.	37	148	100	282	88	46	259	960	4·1
Minor cereals, (kangni, &c.)	S.	86	319	861	127	231	397	169	2,190	...
	D.	..	...	...	48	107	132	22	304	12·2
Garden crops ...	S.	65	12	497	29	558	423	46	1,630	...
	D.	...	...	...	...	...	344	21	365	18·3
Hemp ...	S.	697	1	199	25	115	85	22	1,144	...
	D	...	...	...	...	...	...	2	2	...
Crops only grown singly.		770	1,061	1,047	1,257	778	1,102	1,147	7,170	...
Total kharif ...	S.	57,095	49,108	76,078	65,270	54,621	71,590	73,186	446,948	...
	D.	2,875	4,990	2,009	2,449	3,117	6,689	14,856	36,985	7·6
Total area under kharif.		59,970	54,098	78,087	67,719	57,738	78,279	88,042	483,933	...
Wheat ...	S.	14,478	13,378	2,884	7,947	13,887	18,928	11,695	83,197	...
	D.	795	1,853	547	545	797	928	2,448	7,913	8·7
Wheat-barley ...	S.	1,115	1,555	303	2,418	165	1,892	1,571	9,019	...
	D.	207	355	98	121	180	4	270	1,235	12·1
Barley ...	S.	5,013	5,564	325	1,796	1,335	5,642	2,625	22,300	...
	D.	378	999	200	387	902	1,273	1,531	5,670	20·2
Rejhar and gochani.	S.	13,722	12,391	26,959	23,299	14,750	16,751	12,340	120,212	...
	D.	1,238	1,550	867	907	861	1,840	2,160	9,423	7·3
Gram, &c. ...	S.	2,727	2,062	10,734	4,091	7,711	10,223	15,594	53,142	...
	D.	198	233	297	431	334	2,254	8,120	11,867	18·2
Oilseeds ...	S.	2,728	907	250	1,069	467	347	117	6,885	...
	D.	59	...	...	58	42	44	57	260	4·2
Garden crops ...	S.	107	386	75	230	256	470	341	1,865	...
	D.	...	...	...	...	1	346	...	347	15·7
Tobacco ...	S.	119	153	66	268	57	50	143	858	...
	D.	...	..	...	...	...	...	74	74	8·0
Jira ...	S.	...	...	...	...	2	...	155	157	...
	D.	...	...	...	...	...	...	196	196	55·5
Crops only grown singly.		240	225	485	509	1,212	2,197	428	5,296	...
Total rabi ...	S.	40,249	36,621	42,081	41,627	39,842	56,509	45,009	301,929	...
	D.	2,875	4,990	2,009	2,449	3,117	6,689	14,856	36,985	10·9
Total area under rabi.		43,124	41,611	44,090	44,076	42,959	63,189	59,865	338,914	...

Crop Statement E.—showing the character of the crops grown in the double-cropped area.

Kharif.		*Rabi crops following kharif.*						
Crop.	Area subsequently cropped with rabi.	Wheat.	Barley.	Wheat-barley.	Bejhar and gochni.	Gram and pease.	Garden crops, jira, and tobacco.	Oil-seeds.
Juar	12,522 (33·9)	4,059 (11·0)	161 (0·5)	1,700 (4·6)	3,291 (8·9)	3260 (8·8)	7 ...	44 (0·1)
Bajra	16,545 (44·9)	2,554 (6·9)	427 (1·2)	1,839 (5·0)	3,539 (9·6)	7766 (21·0)	254 (0·7)	166 (0·5)
Cotton	5,212 (14·1)	753 (2·0)	180 (0·5)	1,447 (3·9)	2,275 (6·3)	545 (1·4)	12 ...	... ...
Indigo	228 (0·6)	22 (0·1)	2 ...	106 (0·3)	7 ...	91 (0·2)	... ...	... ...
Maize	817 (2·2)	294 (0·8)	120 (0·3)	245 (0.7)	111 (0·3)	77 (0·1)	... ...	... ...
Minor cereals ...	304 (0·7)	52 (0·1)	... ...	156 (0·4)	28 (0·1)	68 (0·1)	... ...	... ...
Pulses	962 (2·6)	179 (0·5)	345 (0·9)	156 (0·5)	172 (0·5)	60 (0·1)	... ...	50 (0·1)
Garden crops ...	365 (1·0)	... ...	... ...	21 (0·1)	.. ...	... ...	344 (0·9)	... ...
Total double-cropped area.	36,985 (100)	7,913 (21·3)	1,235 (3·3)	5,670 (15.3)	9,423 (25·5)	11,867 (32·1)	617 (1·7)	260 (0·8)

NOTE.—The figures within brackets denote the percentage of the double-cropped area growing each crop at the two harvests.

Crop Statement F.—giving statistics for 1286 *fasli* (1878-79 A. D).

Crop.	Itimádpur.	Firozabad.	Pinahat.	Fatehabad.	Agra.	Fatehpur Sikri.	Khairagarh.	District.
Kharif.								
Juar	25,332	21,559	17,748	21,320	32,274	37,156	30,173	1,85,557
Bajra	14,263	16,231	46,490	23,417	9,972	14,458	23,179	1,48,050
Cotton	14,838	11,290	11,866	11,931	8,441	16,235	15,946	90,547
Maize	908	1,873	...	222	163	829	315	3,810
Indigo	1,004	1,447	...	135	1,682	1,513	23	5,804
Sugarcane	389	560	429	2,066	523	1,104	645	5,716
Garden crops ...	636	409	319	579	643	300	553	3,439
Miscellaneous (1) ...	769	669	278	1,553	1,336	4,554	11,616	20,775
Ditto (2) ...	951	769	136	232	176	1,841	312	4,417
Total ...	59,090	54,807	77,261	61,455	55,210	77,530	82,762	4,68,115
Rabi.								
Wheat	13,702	9,588	2,226	5,997	7,895	7,433	6,771	54,612
Wheat-gram ...	1,862	1,630	3,108	66	52	1,444	567	8,729
Wheat-barley ...	1,947	1,408	16	184	514	3,469	724	8,262
Bejhar (3) ...	24,297	23,293	22,581	27,298	20,259	21,522	17,484	1,56,724
Gram	1,098	1,050	9,083	6,778	4,917	2,684	17.395	43,005
Garden crops ...	500	577	187	351	1,836	431	469	4,361
Miscellaneous, (1) ...	5	27	51	189	31	569	1,800	2,672
Ditto (2) ...	2,300	894	290	692	531	845	145	5,697
Total ...	45,711	38,467	37,542	42,555	36,035	38,397	45,355	2,84,062
GRAND TOTAL ...	1,04,801	93,274	1,14,803	1,04,010	91,245	1,15,927	1,28,117	7,52,177
Area cultivated ...	97,110	89,177	1,14,588	1,03,158	89,676	1,13,491	1,18,840	7,26,040
Double-cropped area ...	7,691	4,097	215	852	1,569	2,436	9,277	26,'37

(1) Food crops. (2) Other miscellaneous crops. (3) Under this heading is included the area growing barley.

Crop Statement G.—showing the irrigated and double-cropped areas for 1286 *fasli.*

	Itimádpur.	Firozabad.	Pináhat.	Fatehabad.	Agra.	Fatehpur Sikri.	Khairagarh.	District.
Areas as by Crop Statement.								
Kharif ... Irrigated ...	2,005	3,306	903	3,303	3,958	7,803	1,757	23,035
Kharif ... Dry	57,085	51,501	76,358	58,152	51,252	69,727	81,005	445,080
Rabi ... Irrigated ...	33,500	30,185	6 102	23,511	24,272	27,586	23,696	168,852
Rabi ... Dry	12,211	8,282	31,440	19,044	11,763	10,811	21,659	115,210
Total ... Irrigated ...	35,505	33,491	7,905	26,814	28,230	35,389	25,453	191,887
Total ... Dry	69,296	59,783	107,798	77,196	63,015	80,538	102,664	560,290
Total ...	104,801	93,274	114,803	104,010	91,245	115,927	128,117	752,177
Area actually cultivated.								
Irrigated	28,611	30,244	6,929	26,097	26,693	33,447	18,718	170,139
Dry	69,699	58,933	107,659	77,061	62,983	80,044	100,122	555,901
Total ...	97,110	89,177	114,588	103,158	89,676	113,491	118,840	726,040
Double-Cropped Area.								
Irrigated	7,494	3,247	76	717	1,537	1,942	6,735	22,048
Dry	197	850	139	135	32	494	2,542	4,089
Total ...	7,691	4,097	215	852	1,569	2,436	9,277	26,137

Statements drawn up in accordance with the new distribution of the parganas.

111. The statements given on pages 66 to 70 have been drawn up in accordance with the new distribution of the parganas. In one respect they are unfortunately, but unavoidably, defective: they do not give the statistics for any one and the same year for all the parganas. They are compiled from the papers drawn up for the year during which the records of each pargana were first attested, and that year necessarily varied for each pargana. They refer in fact to three different years: 1281 fasli for the trans-Jamna parganas; 1283 fasli for Pináhat, Fatehabad, Agra, and Irádatnagar; and 1284 fasli for Farah, Fatehpur Síkri, and Khairagarh. There was nothing exceptional, however, in the seasons of any of those years, so that the returns do, very fairly, represent the annual outturn of the district.

Crop statements A. and B.

112. Statement A. gives the actual areas, and in statement B. will be found the percentages of the total cultivated area sown with the different crops. There are no crops which can be said to be in any way peculiar to this district, grown to any considerable extent. The millets, *juar* and *bajra*, call for no special mention. The minor cereals grown in the autumn harvest comprise *kangani*, *marua*, *kuri*, *sanwan*, *kodon*, and *rice*, but they occupy only three acres per mille. Kangani (*Panicum Italicum*) is the commonest, being grown in every pargana to a certain extent, less frequently, however, north than south of the Jamna. Kuri and sanwan (Panicum miliaceum), coarse grains requiring little or no cultivation, are practically confined to Pináhat. Marua (or mandua) and kodon are known, but can hardly be looked on as one of the products of this district: they are in fact but little grown in any of the western districts. Rice, too, is very rare, though a little is grown in Firozabad and Fatehpur Síkri. The pulses, which, in some parganas, occupy a considerable area, include *moth*, *mung*, *mash*, *rawas* (or *raunsa*), *gawar*, and *arhar*. Of these *moth* is by far the most common and is grown to a large extent in Khairagarh and Fatehabad. *Mung* and *mash*, sown by themselves, are little met with except in Fatehpur Síkri and Khairagarh, the latter being the most usual. *Rawas* is rare, but there is a good deal of *gowar*, especially in Fatehpur Síkri. Sugarcane and indigo are grown in every pargana, but nowhere to any great extent; their cultivation, however, is extending greatly in the neighbourhood of the Agra Canal. Hemp (*san* and *sannai*) is not often sown alone except in Itimádpur. After the millets the most important crop in the kharíf is cotton, which is grown to a very large extent in every part of the district. This wide cultivation of cotton is perhaps the most remarkable feature in the agricultural system of the Agra district.

Amongst the rabi crops there are none which are not too well known to call for mention except perhaps jira (cummin seed), which, however, is confined to Khairagarh.

113. With regard to the actual and relative areas occupied by these crops, the kharíf area is practically divided between juar, bajra, cotton, and the pulses. Juar heads the list, occupying nearly 23 per cent. of the total cultivation and about 40 per cent. of the kharíf area. In two parganas alone, Pináhat and Fatehabad, it yields the place to bajra, while in the Agra pargana, on the other hand, it covers an unusually large area (nearly 30 per cent.), chiefly at the expense of cotton. Bajra in most parganas occupies about 13 per cent. of the cultivated area, but in Pináhat and Fatehabad it is of much greater importance, in the former of which no less than one-third of the cultivation and one-half of the kharíf area is devoted to it. Cotton, an important crop everywhere, is grown somewhat more largely north than south of the Jamna: over the whole district nearly 15 per cent. of the cultivation is under this crop, about one-fourth of the kharíf area being given up to it. Pulses grown by themselves are rare across the Jamna and in Pináhat: in the rest of the district they form an important item in the kharíf, especially in Khairagarh; but they are chiefly grown with the millets, and this is especially true of arhar. This latter crop, while grown alone in only 689 acres, is sown with juar, bajra, or cotton in no less than 104,635 acres. The other pulses also, which are grown alone in 23,136 acres, are mixed with other crops in 80,194 acres. Sugarcane covers in all only 5,865 acres, each pargana growing it to about the same extent. Indigo, on the other hand, is confined almost to the trans-Jamna parganas where canal water is obtainable: hitherto it has been grown but little on this side of the river. Maize, also, is hardly grown except to the north of the Jamna, and there, too, chiefly in Firozabad: its absence on the south side is one of the great marks of difference between the system of agriculture in vogue there, and that of the Duab. The variation in the crops in the kharíf harvest depends on the character of the soil, juar and cotton being chosen for the stouter soils, while bajra is the crop in the lighter and sandier lands.

114. In the rabi harvest wheat in irrigated lands, and bejhar (a mixture of wheat, barley, gram, and pease) in the dry lands are the staple crops north of the Jamna, where wheat occupies nearly 16 and bejhar 14 per cent. of the cultivated area, between them engrossing nearly the whole rabi area. In the quantity of wheat grown Agra and Fatehpur Síkri fall behind but little: but it is much smaller in Khairagarh and Fatehabad and becomes quite insignificant in Pináhat. As the area under wheat diminishes, that under gram or bejhar increases. In Agra, Fatehpur Síkri, and Khairagarh, gram is the crop that takes its place, while in Fatehabad and Pináhat it is for the most part bejhar, though in the latter pargana there is a good deal of gram: in Khairagarh gram is a very important crop, the area growing in it being double of the district average. Barley is grown a good deal north of the Jamna and in Fatehpur Síkri, but is hardly ever sown alone in Pináhat, where it is rarely found except in the mixed form of bejhar. The mixed crop known as gochani (wheat and gram) is found to a limited but uniform extent everywhere south of the Jamna. Oilseeds are rarely grown alone, more commonly indeed than elsewhere in Itimádpur, and very seldom in Khairagarh; but mixed with other crops they occupy a very large portion of the rabi area. They are of five kinds: sarson, duán, rái, láhi, and alsi. Sarson is seldom grown except with other crops; in this way it forms part of the crops of 98,638 acres as follows:—

				Acres.
Sarson sown with wheat	...	...	in	43,228
" " wheat-barley	...	...	"	3,712
" " wheat-gram	...	...	"	3,966
" " barley	...	...	"	11,634
" " bejhar	...	...	"	25,712
" " gram	...	...	"	10,486
		Total	"	98,638

Dnán is more frequently grown alone, and with rái, láhi, and alsi occupies 6,145 acres. These seeds were also grown mixed with other rabi crops thus :—

					Acres.
With wheat	...	...	...	in	3,564
„ wheat-barley	...	...	...	„	544
„ wheat-gram	...	...	...	„	547
„ barley	...	...	...	„	2,121
„ bejhar	...	...	...	„	2,734
„ gram	...	...	...	„	1,873
			Total	„	11,383

Thus oilseeds, though only grown alone in 6,145 acres, were sown with other rabi crops in 109,711 acres, wheat being most frequently the companion crop. Kachhiána or garden crops only occupy one per cent. of the land in both harvests together. The smallness of the area devoted to this kind of cultivation is another of the distinctive features of the agriculture of this district. On the whole Fatehpur Síkri and Agra have the most kachhiána, but even in the latter pargana, where a greater amount might have been expected with a large city, the area thus cultivated at both harvests falls short of 2 per cent. The character of the rabi crops varies, generally speaking, with the extent to which irrigation prevails. It is the want of irrigation in Pináhat that prevents the cultivation of wheat, and leads to such a preponderance of bejhar and gram: while it is to the plentiful irrigation of the trans-Jamna tract that is due the large area under wheat and barley and the comparative absence of gram.

Crop statement C.

115. In considering the extent to which the pulses and oilseeds are grown, the system of mixing certain crops has been brought to notice. Statement C. gives full details. It shows that in 60 per cent. of the area growing juar, that crop is generally grown mixed with pulses of some description or other; arhar being the most usual and most valuable of them, mung and mash also being much used for the purpose. Juar is also grown with bajra, the borders of the fields being sown with hemp and til. Bajra is grown alone more frequently than is the case with juar; in only 36 per cent. of its area is it mixed with the pulses. Arhar is, again, the kind of pulse most frequently used, while amongst the minor pulses moth takes the place of múng and mash. Of the area under cotton, about half is sown with cotton alone and half with cotton mixed with other crops. More than half of this latter portion grows castor with arhar: in the rest juar, and moth or mash is the companion crop, but in all cases hemp is grown as a border crop. Of the mixture of the oilseeds with the principal rabi crops enough has been already said, and this is the only class of minor crops sown in this way. At the same time it should be noted that several of the so called principal rabi crops are really mixed crops, such as gojai (wheat and barley) gochani (wheat and gram), and bejhar (wheat, barley, gram, and pease).

Crop statements D. and E.

116. There is always a certain area producing a double crop, being sown both at the autumn and spring harvests. This area amounted to 36,985 acres, being 4·7 per cent. of the whole cultivated area, and covering 7·6 per cent. of the kharíf and 10·9 per cent. of rabi area. The actual area sown with the different crops at each of the two harvests is shown in statement D. From statement E. will appear (1) in what proportion these different crops divide it at each harvest; (2) what crops in the rabi follow each of the kharíf crops, and what kharíf crops precede each of rabi crop; and (3) what are the most usual combinations.

117. With regard to the first point, it is necessary to compare the proportion of the whole area cultivated at each harvest under each crop with the proportion of the double-cropped under that crop. This comparison is made in the marginal table; and it shows that bajra in kharíf and gram in rabi are both actually and relatively by far the most common crops grown in this area.

Kharif.			Rabi.		
	Percentage of			Percentage of	
	Kharif area.	Double-cropped area.		Rabi area.	Double-cropped area.
Juar ...	36·9	33·9	Wheat ...	26·9	21·3
Bajra ...	28·7	44·9	Wheat-barley ...	3·9	3·8
Cotton ...	23·9	14·1	Barley ...	8·1	15·3
Indigo ...	0·6	0·6	Wheat, gram, and bejhar.	38·3	25·3
Maize ...	1·5	2·2			
Minor cereals ...	0·5	0·7	Gram ...	19·8	32·1
Pulses ...	5·0	2·6	Oilseeds ...	1·6	1·7
Garden crops ...	0·5	1·0	Garden crops ...	1·9	0·8

Barley also relatively to the extent to which it is grown generally covers a large proportion. Juar and wheat are also grown to a great extent, but not in proportion to their importance generally; maize and garden crops on the other hand, as might have been expected, though covering a limited actual area, are chiefly grown in this class of land. Secondly, juar is followed to a very large extent by wheat, and in a less degree by bejhar and gram. Bajra, on the other hand, is generally succeeded by gram, and to a less extent by bejhar, wheat and barley. The crop most commonly chosen after cotton is bejhar, otherwise barley or wheat. The most frequent crop after indigo, maize, and the minor cereals is barley. Lastly, where garden crops are grown in kharíf, the same class is generally grown also in rabi. Wheat is most often preceded by juar; gram and the oil seeds by bajra; barley and bejhar by all three of the main kharíf crops indifferently.

118. Of all the various combination thus arising, very much the most common is that of bajra and gram, which occurred in 21 per cent. of the double-cropped area; next in frequency, but at a considerable interval, comes the sequence of wheat after juar, in 11 per cent., then gram or bejhar after juar, or bejhar after bajra, each in about 9 per cent.; wheat after bajra, or bejhar after cotton, covering each about 6 per cent.; and lastly barley, following juar, bajra, and cotton, about 5 per cent. in each case. The extent to which double-cropping is carried on varies a great deal in different parts of the district. It is largest in Khairagarh (being 11·2 per cent.), where it is generally a sequence of gram or bejhar after bajra; and smallest of all in Pináhat, where it is less than 2 per cent. But on the whole it is very limited as compared with Duáb districts, a result necessarily following from the comparatively small amount of irrigation.

Crops statistics for 1286 fasli. Statement F.

119. I have already mentioned that these crop statements are so far defective, in that they do not refer to one and the same year for all the parganas. Both for this reason and for the purpose of further comparison, I have compiled from the patwáris' returns statements of the area cultivated and the crops grown during the last agricultural year, 1286 fasli (1878-79), the statements are given on pages 69-70. As contrasted with the statistics of settlement, those of 1286 fasli indicate a remarkably large area lying fallow. At survey the total cultivated area which produced a crop of some kind or other was 782,638 acres; in 1286 fasli this area was only 726,040 acres; so that no less than 56,598 acres, which had been in full cultivation not many years ago, were then lying fallow. There is no doubt that to some extent this was a consequence of the bad season of 1285 fasli, from the effects of which the body of agriculturists have by no means recovered. It was also partly due to the scantiness of the rains at the end of September, 1878, which greatly diminished the area of the rabi sowing. In one pargana alone, Fatehpur Síkri, a very large amount of land which had been ploughed up and otherwise prepared for a crop was of necessity left unsown owing to the failure of the rains at that critical period.

So far I have only spoken of the actual area cultivated, but there is always a considerable area of land which produces a double crop. Including this, the total crop-producing area of the year of survey was 819,623 acres; in 1286 fasli it was only 752,177 acres, a deficiency of 67,446 acres or 8 per cent.; of this 10,848 acres represents the falling off in the dofasli area, which was only 26,137 acres as compared with 36,905 acres at survey.

120. If these statements be further examined with a view to ascertaining to what extent the area under the difference crops varied, there will be noticed some curious contrasts. The area under juar, for instance, was larger by 12,254 acres, or 7 per cent., in 1286 fasli, than at survey; the bajra area had increased by 4,504 acres; indigo by 506 acres. On the other hand the area growing cotton dropped from 115,862 to 90,547 acres, a decrease of 25,315 acres, nearly 22 per cent.; and the area under pulses was also less by some 5,000 acres. The net result was that the kharíf area had diminished by 15,818 acres, rather over 3 per cent. The decrease in the rabi area, however, was much more serious, amounting to no less than 51,628 acres, nearly 16 per cent. At this harvest the greatest decrease was in wheat, which was only grown in 54,612 acres instead of 91,110 acres, a difference of 36,498 acres; and next in gram, which covered 20,334 acres less than it did at survey, and gram-wheat, in which there was a decrease of 3,568 acres. There was, on the other hand, an increase of some 11,000 acres in the area under barley and bejhar.

The relative extent to which irrigation issued for the different crops.

121. These returns for 1286 fasli contain, too, some useful information which the settlement statistics did not give. They show what portion of the area under each crop and of each pargana was actually irrigated in that particular year. The proportion per cent. for each crop and harvest was as shown in the margin. Practically speaking, it may be assumed that indigo, sugarcane, and kachhiána in the autumn, and wheat, wheat-barley, and kachhiána in the spring harvest are always intended to be irrigated; while juar, bajra and the pulses in the kharíf and gram in the rabi are sown in unirrigable lands.

Kharíf crops.	Per cent. grown with irrigation.	Rabi crops.	Per cent. grown with irrigation.
Juar ...	1	Wheat ...	92
Bajra ...	½	Wheat-gram ...	44
Cotton ...	5	Wheat-barley ...	92
Maize ...	35	Bejhar ...	62
Indigo ...	81	Gram ...	9
Sugarcane ...	98	Garden crops ...	89
Garden crops ...	87	Miscellaneous food crops.	77
Miscellaneous food crops.	5		
Do. other crops,	12		
Total ... Kharíf	5	Total ... Rabi	60

The proportion of the irrigable area annually irrigated.

122. There is another interesting point brought out by these statements, *viz.* the area actually irrigated in any given year, and its proportion to the so-called irrigated area of the district. The term 'irrigated' in the settlement statistics of course includes all the area that is irrigable and has been irrigated within a few years; but the area actually irrigated in the course of any particular year is much smaller. As it is the usual custom to alternate kharíf or rabi crops, it might be conjectured that about one-half of the irrigable area is irrigated every year; this proportion, however, appears to be slightly over the mark for this district. In 1286 fasli 170,139 acres were actually irrigated; while the area recorded at survey and assumed as 'irrigated' was 436,363 acres. But some allowance must be made for the peculiar season of that year, which, as we have seen, led to a great decrease in the cultivation, especially in the rabi area, the area generally irrigated. Adding therefore 5 per cent. of the 15,818 acres by which the kharíf area fell short, and 60 per cent. of the 51,628 acres by which the rabi area was abnormally reduced, *i. e.*, 31,562 acres in all, it may be fairly concluded that in ordinary years, such as those in which the survey was made, the area actually irrigated would have amounted to 170,139+31,562 acres, or 201,701 acres, which would be just 46 per cent. of the irrigable area. From this may be deduced the fact that the average area actually watered annually by a single well-bucket is only about 2·3 acres, though the area *protected* by it is 5 acres.

Influence of canal irrigation on the character of the crops grown.

123. As it is barely four years since irrigation has commenced from the Agra Canal, and only within the last two years that its full powers have been put forward, it is somewhat early to expect any great change in the character of the crops as a result of the facility of obtaining canal irrigation. Nevertheless, the table in the margin shows that, short as the time has been, there are already marked signs of increase in the areas devoted to such classes of produce as are most essentially dependent on *certain* irrigation. These statistics show the areas under each crop at the year of survey in two parganas, Fatehpur Sikri and Agra, in those villages of them in which canal irrigation has been introduced: the second column shows the areas in those same villages in the year 1286 fasli, the last agricultural year, and the fourth year of canal irrigation. The decrease in the *total* area is due to special causes which were not peculiar to these villages, and have been already discussed; and only renders more remarkable the increase that has taken place in the cultivation of certain crops. Of these the most striking examples are indigo and sugarcane The area under the former is seven times as large as it was four years ago, while the sugarcane area has increased 50 per cent. The increase under bajra I believe to point to an increase in the double-cropped area, the first crop in such land being generally bajra in this district; the decrease under gram is only natural, but the very large diminution in the wheat area is curious. From the increase in the land sown with barley and bejhar it would seem as though the cultivators found canal water better adapted to the cultivation of barley than to that of wheat. The gradual increase in the indigo, sugarcane, barley, and bejhar cultivation will also appear from the canal returns for the whole area irrigated from this canal within the limits of the Agra district:—

Crops.	1283 fasli.	1286 fasli.
Juar ...	25,903	26,499
Bajra ...	3,144	6,252
Cotton ...	12,853	11,026
Maize ...	140	258
Indigo ...	344	2,453
Sugarcane ...	699	1,030
Garden crops ...	189	335
Miscellaneous ...	3,486	2,425
Total, kharif ...	46,758	50,278
Wheat ...	14,640	5,961
Wheat-gram ...	151	94
Wheat-barley ...	411	947
Bejhar and barley,	11,270	16,678
Gram ...	9,431	2,822
Garden crops ...	572	580
Miscellaneous ...	367	796
Total, rabi ...	38,396	27,878
Grand Total ...	85,154	78,156

Year.	Sugarcane.	Indigo	Cotton.	Miscellaneous kharif.	Wheat.	Barley.	Gram	Miscellaneous rabi.	Total.
1283 ...	230	396	232	372	1,747	465	669	2,919	6,172
1284 ...	660	1,316	2,932	1,761	3,579	505	1,133	6,543	13,524
1285 ...	1,168	3,716	4,084	11,032	10,264	1,599	2,290	20,468	45,653
1286 ...	1,707	3,758	750	7,769	2,493	5,112	754	9,600	25,728

The prices of agricultural produce from 1812 to 1876.

124. The statistics that have been collected with regard to the prices of agricultural produce are given in the price statements on pages 76-77. Statement A. gives the amount of each of the chief kinds of produce selling for the rupee for every year from 1812 to 1876. Statement B. is an abstract of it, designed to bring out more prominently the chief facts which may be gathered from the more detailed statement. Certainly the most striking fact is the recent date from which prices have begun to rise. That there has been a great rise of late years is universally recognised, but it will be seen that it is not very long ago since it commenced. Prices may be said to have been almost stationary up till 1860, there being in fact a fall from 1840 to 1860 as compared with the preceding twenty years. The reality of the rise, though it was not very great, is shown by the fact that it occurs alike in regard to *all* classes of produce. But since 1860 the rise has been not only equally general, but relatively very much greater. The average price for the decade 1861-70 is but little short of 50 per cent. above the average for the preceding decade; nor since 1870 have prices shown any tendency to fall again to their former level.

Price Statement A.

Year.	Wheat.	Barley.	Gram.	Juar.	Bajra.
1812 ...	34	51	48	43	41
1813 ...	21	25	21	25	24
1814 ...	30	45	33	40	43
1815 ...	42	62	48	59	53
1816 ...	35	36	39	49	45
1817 ...	28	40	32	32	33
1818 ...	18	23	19	22	20
1819 ...	17	23	21	22	22
1820 ...	17	22	20	19	20
Average ...	27	36	31	35	33
1821 ...	27	38	26	33	36
1822 ...	30	47	34	37	38
1823 ...	24	35	40	29	30
1824 ...	31	44	47	38	37
1825 ...	28	36	37	31	29
1826 ...	20	26	24	24	24
1827 ...	22	33	34	35	30
1828 ...	31	43	36	40	37
1829 ...	36	52	50	47	45
1830 ...	35	46	45	40	39
Average ...	28	40	37	35	34
1831 ...	31	39	39	32	32
1832 ...	34	47	47	37	35
1833 ...	31	40	38	33	31
1834 ...	25	34	28	27	28
1835 ...	30	43	36	41	39
1836 ...	32	45	41	41	34
1337 ...	23	30	30	26	26
1838 ...	14	16	14	20	19
1839 ...	20	29	25	34	37
1840 ...	23	30	27	28	29
Average ...	26	35	32	32	30
1841 ...	30	35	30	32	32
1842 ...	31	40	30	33	33
1843 ...	15	20	19	20	18
1844 ...	31	51	50	45	40
1845 ...	27	44	38	34	30
1846 ...	27	40	40	45	40
1847 ...	29	46	34	40	35
1848 ...	29	42	29	40	37
1849 ...	14	16	15	19	18
1850 ...	35	56	52	42	38
Average ...	27	39	34	35	32
1851 ...	25	53	60	55	50
1852 ...	27	36	40	38	35
1853 ...	26	40	26	37	35
1854 ...	29	50	32	40	40
1855 ...	36	54	50	50	46
1856 ...	35	47	41	39	34
1857 ...	22	36	38	30	21
1858 ...	23	36	43	30	21
1859 ...	23	34	42	26	26
1860 ...	20	27	24	13	13
Average ...	27	41	40	36	32
1861 ...	15	18	16	13	13
1862 ...	29	38	31	35	34
1863 ...	25	34	33	32	32
1864 ...	18	25	20	31	20
1865 ...	16	23	18	22	20
1866 ...	16	25	24	25	22
1867 ...	18	27	22	25	22
1868 ...	18	26	21	25	18
1869 ...	11	16	11	15	13
1870 ...	16	26	16	25	24
Average ...	18	26	21	25	22
1871 ...	21	30	24	28	24
1872 ...	18	24	22	20	17
1873 ...	16	23	20	21	18
1874 ...	16	23	24	21	17
1875 ...	20	29	28	26	25
1876 ...	25	33	32	29	29
Average ...	19	27	25	24	22

Price Statement B.—showing the highest, lowest, and average prices of agricultural produce (in seers per rupee) for each decade from 1812 to 1876 A. D.

	Juar.			*Bajra.*			*Wheat.*			*Barley.*			*Gram.*			*Remarks.*	
	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Lowest.	Highest.	Average.	Years of low prices.	Years of high prices.
1812-1820	58	19	34	53	20	33	42	17	27	62	22	37	48	19	31	1815	1819-20
1821-1830	46	24	35	45	24	34	36	20	28	52	26	40	50	24	37	1829	1826
1831-1840	37	20	32	38	19	30	34	14	26	46	16	35	47	14	33	1832	1838
1841-1850	85	30	42	80	35	41	35	27	31	80	20	41	40	29	36	1850	1841-42
1851-1860	52	15	40	50	15	37	36	20	30	54	27	42	50	20	41	1851-52	1854-59
1861-1870	35	15	26	34	13	24	29	11	18	38	16	26	33	11	23	1862-63	1869
1871-1876	29	20	24	29	17	22	25	16	19	33	23	27	32	20	25		

NOTE.—The figures denote the number of seers sold for the rupee.

Price Statement C.—showing the price of the principal grains at the Tahsili towns for three decennial periods, (*A.*) 1841-50, (*B.*) 1851-60, (*C.*) 1861-70, (*D.*) *for the whole period* 1841 *to* 1870.

		Trans-Jamna parganas.		Pináhat.		Fatehabad.		Agra.		Fatehpur Sikri.		Khairagarh.		District average.	
		M.	s.	M.	s.	M.	s.	M.	s.	M.	s.	M.	s.	M.	s.
Juar ...	*a*	0	39	1	4	1	15	Not known.		1	0	0	34	1	2
	b	0	39	1	7	0	38	0	32	1	1	1	2	1	0
	c	0	24	0	29	0	23	0	25	0	28	0	26	0	26
	d	0	34	1	0	0	39	...		0	36	0	34	0	36
Bajra ...	*a*	0	36	1	2	1	11	Not known.		1	2	0	33	1	1
	b	0	37	1	7	0	35	0	28	0	37	1	1	0	37
	c	0	22	0	27	0	25	0	22	0	26	0	25	0	24
	d	0	32	0	39	0	37	...		0	35	0	33	0	34
Wheat ...	*a*	0	31	0	29	0	34	0	31	0	35	0	23	0	21
	b	0	36	0	30	0	26	0	27	0	30	0	31	0	30
	c	0	21	0	18	0	18	0	18	0	19	0	17	0	18
	d	0	30	0	26	0	26	0	25	0	28	0	24	0	26
Barley ...	*a*	1	4	1	0	1	14	0	37	1	3	0	31	1	1
	b	1	6	1	4	1	0	1	1	1	2	1	1	1	2
	c	0	21	0	29	0	27	0	26	0	39	0	26	0	26
	d	0	38	0	36	1	0	0	35	0	36	0	33	0	36
Gram ...	*a*	1	2	0	34	1	7	0	32	0	34	0	30	0	36
	b	1	9	1	4	0	35	1	0	0	38	1	2	1	1
	c	0	26	0	24	0	23	0	22	0	23	0	21	0	23
	d	0	39	0	34	0	35	0	31	0	32	0	31	0	33
				S.	c.	S	c.	S.	c.	S.	c.	S.	c.	S.	c.
Cotton ...	*a*	Not known.		5	4	6	2	Not known.		5	1	4	3	5	2
	b			5	11	5	6	Ditto.		4	3	4	4	4	3
	c			2	12	2	12	2	10	3	3	3	2	2	14
	d			4	9	4	12	...		4	2	3	14	4	4

125. Statement C. brings together for comparison the prices ruling in the different parts of the district, and shows that the recent rise in prices has extended to all parganas alike.

I will conclude by quoting some of the remarks made by my predecessors in their pargana reports. The late Mr. Smith in his report on Itimádpur (page 25) compares the prices current in the five years 1832-36 with those paid from 1871 to 1875, the two periods immediately preceding the last and the present settlements. He says:—"In neither of these terms was there any famine or scarcity. The seasons were normal and yields average, yet the prices of the later period were more than 50 per cent. above those of the earlier. Not only have prices risen greatly within the term of settlement, but their range for the last many years has been considerably above the average for a long period before the current settlement was effected, and all the comparisons made show that, examine the prices of past years how we may, there has been a considerable rise of late years. There can be no doubt that the rise in prices has influenced rents, but how far it is impossible to say exactly, the price of grain being but one element out of many affecting rents." Mr. Benson in his report on Firozabad (page 38) from a comparison of the prices of these same periods deduces a rise of 58 per cent. in prices, and adds: "there is no ground for thinking that the average for the years 1870-74 does not fairly represent the present state of the market and a rise in prices which is likely to be permanent. Wheat, the steadiest in price, has risen most." In the Farah report (page 32) we read: "For the period 1863-73 prices on the whole had risen between 60 and 70 per cent. above those prevailing in the 11 years immediately succeeding Mr. Mansel's settlement, and between 40 and 50 per cent. above those of the 11 years 1852-62. There has been no permanent fall since 1873, so that, putting aside the rates of the present exceptional season (1876), prices may be said to be more than half as high again as they were when the last settlement was effected." The returns for Fatehpur Sikri and Khairagarh led me to conclusions similar to those arrived at by the officers whose remarks I have been quoting.

Increase in population since last settlement.

126. Mr. Mansel in his report on the last settlement gives the density of the population per square mile in each pargana. The census taken in 1865 and 1872

give the population at these dates. There are also some statistics of a census taken in 1853, but they are so incomplete and contradictory as to be useless for the purposes of comparison. The following statement shows the density in each pargana as calculated from these returns :—

Pargana.	Density of population per square mile.			Increase per cent.		
	1840.	1865.	1872.	Between 1840 and 1865.	Between 1865 and 1872.	Between 1840 and 1872.
Itimádpur ...	381	507	552	38	9	44
Firozabad ...	257 (?)	492	547	91 (?)	11	113 (?)
Pináhat ...	336	402	449	20	11	34
Fatehabad ...	333	403	432	21	7	30
Agra* ...	1,057	1,390	1,410	31	1	33
Irádatnagar ...	411	558	564	35	2	38
Farah ...	348	484	502	30	4	44
Fatehpur Síkri ...	456 (?)	459	506	1 (?)	10	11 (?)
Khairagarh ...	292	411	429	41	4	47
District ...	424	515	550	21	7	30

There is obviously some mistake in Mr. Mansel's figures for Firozabad and Fatehpur Síkri, the former being as much too low as the latter are too high. Omitting these two parganas, the increase in the population would appear to have ranged between a minimum of 30 per cent. in Fatehabad to a maximum of 47 per cent. in Khairagarh, with a general increase throughout the district of 30 per cent. The accuracy of this conclusion depends of course on the trustworthiness of Mr. Mansel's figures. It is however confirmed to a great extent by a comparison of the population in 1865 with that of 1872. It would appear that in those seven, years the increase in the district population was 7 per cent. ; and if this be true, an increase of 30 per cent. in the 32 years from 1840 to 1872 is no greater than might have been expected.

NOTE.—The pleas I have urged in justification of the assumption that the rent-rate paid by tenants-at-will in Pináhat and North Khairagarh bore a different relation to the average letting value of land in those tracts to that which it bore in South Khairagarh, depend on the accuracy of my assertions that the land held by tenants-at-will is generally inferior, and that owing to the comparative uniformity of the soil in the former tracts, and want of uniformity in the latter, the inferiority in the value of the poorer lands held by the tenants-at-will is relatively greater in the latter than is the case in the former. To ascertain the accuracy or inaccuracy of this supposition I caused to be drawn up a statement showing the classification of the lands held by tenants-at-will, so that they might be compared with the rest of the cultivated area, and the degree of their inferiority judged by calculating their value at assumed rates, and comparing it with the value of the other lands at those rates. The result proved to be as follows :—

Class of soil.	Pináhat.				North Khairagarh.				South Khairagarh.			
	Tenants-at-will.		Other lands.		Tenants-at-will.		Other lands.		Tenants-at-will.		Other lands.	
	A.	R.	A.	R.	A.	R.	A.	R.	A.	R.	A.	R.
		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
Irrigated Gonda ...	453	2,944	1,386	9,009	459	3,576	1,677	13,065	725	6,011	2,858	23,852
Do. manjha ...	416	2,392	1,523	8,757	602	4,0[illegible]4	2,101	14,018	794	5,310	2,667	17,860
Do. barha ...	3,708	18,540	12,276	60,954	3,[illegible]07	17,19[illegible]	9,224	52,670	3,050	17,298	8,045	45,654
Dry gonda ...	460	2,769	1,484	8,904	19	100	90	472	185	959	490	2,539
Do. manjha ...	705	3,701	2,190	11,498	102	529	374	1,933	386	1,486	1,919	4,051
Do. barha ..	14,039	50,613	49,025	1,86,991	4,311	16,301	11,989	46,318	9,783	20,827	24,666	52,527
Total ...	19,781	80,350	67,881	2,86,113	8,500	41,721	25,455	1,27,506	14,923	51,891	39,740	1,46,283
Average rate per acre.	Rs. 4 0 11		Rs. 4 3 2		Rs. 4 14 6		Rs. 5 0 2		Rs. 3 7 6		Rs. 3 10 11	

Column A. gives the area, column R. the rent.

Comparing in these three tracts the value of the lands held by the tenants-at-will with that of the remainder of the cultivated area, it will be seen that in Pináhat the former is only 3½ per cent., and in North Khairagarh only 2 per cent., below the latter, in South Khairagarh the difference is 6 per cent. As far then as these two parganas are concerned, it is *proved* that the tenants-at-will hold less than their share of the better and more of the inferior soils : and I think it may be concluded that the same rule holds good in the rest of the district It is also proved that the difference in the value of their lands from that of the rest of the cultivation is very much greater in South Khairagarh than in North Khairagarh or Pináhat. The importance of placing these two facts beyond all doubt must be my apology for discussing the matter at so great a length.

* Exclusive of the city, the population in 1865 was 611, and in 1872, 619 per square mile.

PART IV.

INSPECTION AND ASSESSMENT.

127. It is unnecessary to give any account of the system of inspection which was followed in the settlement under report. Though the assessment of the district was divided amongst three officers, they all worked on precisely the same principle. The method was that which has been generally adopted of late years in these provinces, and may be briefly described as consisting of the demarcation of areas of like soil and capabilities, differing from one another in the natural character of the soil or the artificial advantages of irrigation and manure. This demarcation was in the first instance worked out by subordinate officials who had been trained to the work. But this was only as a preliminary: every village was subsequently carefully inspected by the assessing officer, and the accuracy of the limitation of the different tracts of similar land was tested and ensured. At the same time notes were taken of the physical and other characteristics of the village, and inquiries made into the rent rates prevalent in the village under inspection. These notes, and the statistics derived from a calculation of the areas of similar soils and from the village records, formed the data by means of which the settlement officer assessed the rates to be assumed for the purpose of assessment. System of inspection.

128. The variable elements in any tract of land are (1) the natural soil, (2) the extent of irrigation, (3) the supply of manure. In the general description of this district given in Part I. a good deal has been already said of the various soils found in different parts of this district. But I must again call attention to the four natural divisions of this district mentioned there. It will be found that each has certain peculiari s in soil which distinguish it from any of the others. There are in all as many as twelve different kinds of soil. Of these three are of a clayey character, *viz.*, *chiknot*, *mar*, and *matiyar*; two are loam—*dumat* and *tarai*; two are sandy—*piliya* and *bhur*; two are stony—*pakra* and *kakret*, and three are alluvial—*khadir*, *kachhár*, and *khitri*. The natural soils.

129. Some of these soils exist in every part of the district, and only vary in respect of the extent to which they prevail. Amongst this class by far the most important is the ordinary '*dumat*.' Over the district as a whole no less than three-fourths of the total cultivated area is of this soil. It is more specially the soil of the Jamna-Utanghan tract, where it forms no less than 81 per cent. of the cultivated land; north of the Jamna the proportion falls to 71 per cent., while in Pinahat only just half of the land is dumat. Next in frequency and general importance is the soil known is '*piliya*.' It is often very difficult to draw the line between '*dumat*' and '*piliya*;' and in those tracts where *piliya* is more common, much of what is called 'dumat' is little more than '*piliya*,' which has been rendered stiffer by the action of water: there is of course much soil that is indisputable dumat, whilst other is as undoubtedly piliya, but much of the lighter dumat might be classed piliya, and the stiffer piliya might be reckoned as dumat. That much of the land classed as 'dumat' is essentially the same as piliya is, I think, shown by the fact that in the trans-Jamna tracts 88,734 acres of *irrigated* land have been classified as dumat, and only 12,167 acres as piliya, while in the dry lands there are only 16,737 acres of dumat as against 17,756 acres of piliya. There can be little doubt that much of the land classed as irrigated dumat would have been of the character of piliya had it not been changed by irrigation. (*a*) dumat.

130. The proportion of *piliya* is largest in Pináhat, where it amounts to 23 per cent., and next largest in the trans-Jamna country, where it is 20 per cent. In the main part of the district it is much less common. *Bhur* or genuine sandy soil is not often met with anywhere, and only 3 per cent. of the land is classified under that heading. (*b*) piliya. (*c*) bhur.

131. The clay soils cover much the same areas as bhur, *viz.*, 3 per cent, but in certain parganas they are more commonly met with, *e. g.*, in Fatehpur Sikri, where 9 per cent., and in Pináhat, where 10 per cent., of the soil is clay. *Chiknot* exists in all parts of the district, and particularly in the western portion of Fatehpur Síkri. *Mar* (*d*) chiknot. (*e*) mar.

(f) matiyar,
(g) pakhar or kakret.

is peculiar to Pináhat, and *matiyar* to south Khairagarh. The characteristics of these two last named soils have already been described (*vide* pages 9-10). The names *pakhar* and *kakret* are local terms for the same soil which is the shallow soil found on the edges of ravines, full of nodules of kankar ; it is called kakret north of the Jamna and generally pakhar or pakhra on the southern side.

(h) the alluvial soils.

132. The alluvial soils *khadir* and *kachhar* were described in detail in Part I. Their area is not of importance, except in Fatehabad and Pináhat, where the alluvial lands are not only of considerable extent, but of a far greater fertility and value than elsewhere in the district. *Khitri* is the term applied to the thin layer of soil deposited on the sands of the river bed, and is almost confined to the channel of the Utanghan, where it passes through Fatehpur-Síkri and Khairagarh.

Relative extent of the different soils.

133. The following statements show the proportion of each soil in the cultivated area of (1) each pargana and (2) each of the four natural divisions of the district :—

Soil.	Itimádpur.	Firozabad.	Pináhat.	Fatehabad	Agra.	Irádatnagar.	Farah.	Fatehpur-Síkri	Khairagarh.	District.	Total area of soil.
Chiknot	1	2	3	...	...	1	1	0	3	2·4	19,022
Mar	...	...	7	...	...	...	...	...	...	0·8	6 657
Matiyar	...	...	...	...	...	...	...	...	4	0·4	3,044
Dumat	65	79	51	64	87	85	84	84	83	75·0	6,01,343
Tarai	...	...	...	...	...	...	...	...	3	·3	2,001
Piliya	23	15	23	18	4	9	10	1	6	12·6	1,01,154
Bhur	6	2	1	4	4	1	3	5	1	3·	24,597
Pakhra and kakret ...	3	1	4	5	3	...	1	...	...	1·9	15,951
Khadir, Kachhar, and Khitri.	2	1	11	9	2	4	1	1	...	3·6	28,691

Soil.	Trans-Jamna tract.		Jamna-Utanghan Duab.		South Khairagarh.		Pináhat.	
	Per cent.	Acres.	Per cent.	Acres.	Per cent.	Acres.	Per cent.	Acres.
Chiknot ...	1·5	2,771	3·	11,523	3·	1,659	3·	3,069
Mar ...	...	...	...	...	...	...	7·	6,659
Matiyar ...	...	...	...	29	6·	3,015	...	...
Dumat ...	71·	1,34,938	81·	3,73,815	77·	42,277	51·	50,313
Tarai ...	...	...	...	...	4·	2,001	...	...
Piliya ...	20·	36,947	8·	36,461	9·	4,794	23·	22,949
Bhur ...	4·	7,399	3·	15,782	1·	579	1·	837
Kakret ...	2·	4,478	2·	7 633	...	...	4·	3,840
Khadir ...	1·5	2 492	3·	14,458	...	120	11·	11,624

Characteristics of the different portions of the district.
(a) north of the Jamna.
(b) the Jamna-Utanghan Duab.
(c) south of the Utanghan.

In the trans-Jamna tract the most noteworthy feature is the large area of *piliya* soil and the small extent of *chiknot*, and these peculiarities are much more marked in Itimádpur than in Firozabad, owing to the greater area affected by the river ravines in the former pargana. South of the Jamna, the main body of this district is remarkable for the very large proportion of dumat soil, and the comparative infrequency of the sandy soils ; to this general character of the tract, Fatehabad, however, constitutes an exception, rather resembling the trans-Jamna parganas in possessing a large area of sandy soils, while it approaches Pináhat in respect to the extent of its alluvial lands. South of the Utanghan, in Khairagarh, we have a soil '*matiyar*' which is peculiar to this portion of the district : the soil termed 'tarai,' also to be found only in this pargana, is only 'dumat' in a low-lying country. Pinahat differs widely from the rest of the district, in respect to almost every class of soil in the first place it alone possesses any '*mar*' soil, which composes 7 per cent. of the cultivated area ; next its proportion of *dumat* is exceedingly small, while it has relatively to the rest of the district twice its share of *piliya*. It has nearly twice the average of '*pakhra*' soil ; and its alluvial lands are even more extensive and more valuable than those of Fatehabad.

The large proportion of dumat and piliya soils.

134. As regards then the first element, that of the natural soil, the most striking feature is the immense preponderance of the ordinary dumat and piliya soils. When

a descent is made to the assessment of the individual villages, there are no doubt many instances in which it is absolutely necessary to observe and give effect to the existence of the poorer and sandier soils; but looking at the district or even individual parganas as a whole, the soil is so generally and uniformly dumat and piliya that the valuation of the land is but little affected by the existence of limited areas of other soils.

Manure and irrigation.

135. It is evident, therefore, that it is on the two remaining elements—the effects of irrigation and manure—that the classification of the land chiefly depends. To determine whether a field should be classed as irrigated or not is, for the most part, a simple matter, the existence of the well which irrigates it being an unmistakeable guide. But in the determination of the limits of the manured and unmanured areas, the judgment of the inspecting officer is more especially required. The terms gonda, manjha, and barha or hár are too well known now to need any definition; they may be translated as the home lands, the middle lands, and the outlying lands. Broadly speaking their value depends on their relative proximity to the site to which they are attached; land nearer the site being, *ceteris paribus*, of more value, as being more easily manured, than lands more remote. The two first classes are always manured, and generally irrigated; the third more rarely manured, and irrigated or not according to circumstance. There are of course exceptions to this rule in individual villages owing to some disturbing natural elements, and we have in Pináhat a whole pargana which, in this respect, is very exceptional, but for the district as a whole the rule holds good. The pargana reports give the fullest details of the classification of the soils, and the rates at which they were assessed. I propose in this report to compare the working of the settlement officer in the different parganas, and to endeavour to explain the reason for the variations in it, where such exist.

Division of the cultivated area with reference to manure.

136. In the first place I will proceed to examine the result of the demarcation of the gonda, manjha, and barha lands. It has been to divide the cultivated area in the proportions shown in the marginal table. There is generally speaking not more variation in the proportion than might be expected. Over the district as a whole about 17 per cent. of the cultivated area has been classed as manured land, and 83 per cent. as unmanured, the limits of the divergence from this average are, with one exception, from a maximum of 22 to a minimum of 14 per cent. of manured land. The one exception to this general rule is Pinahat; and the cause of this, as explained by Mr. Smith in his pargana report, lies in the fact that "though in the level uplands the gonda circles are of normal extent, in all the villages which skirt the banks of the rivers (a very large proportion of the whole pargana) the sites are built among the ravines, far away from all fields, with nothing but barren and broken land around them." This absence of any incentive to concentration, combined with the general lack of irrigation, has led in this exceptional tract of country to "the almost invariable use of manure on all but the very worst lands," and the distinction between the home and outlying lands in this respect is much less marked than elsewhere. It is less easy to account for the variations in the other parganas. One cause of difference is no doubt to be found in the different density of population; the proportion of the gonda and manjha lands being certainly larger in the more populous tracts. For instance Iradatnagar is the most thickly inhabited of the outlying parganas, and has the largest proportion of home land, and Khairagarh and Fatehabad with the thinest population have a more limited gonda area.

Pargana.	Percentage of cultivated area classed as		
	Gonda.	Manjha.	Barha.
Itimádpur	7·3	9·9	82·8
Firozabad	9·2	10·8	80·
Pináhat	3·8	4·9	91·3
Fatehabad	7·8	9·1	83·1
Agra	8·6	10·2	81·2
Irádatnagar... ...	9·8	12·	78·2
Farah	8·3	10·1	81·6
Fatehpur-Síkri ...	5·8	8·	86·2
North Khairagarh ...	6·6	9·4	84·
South ditto ...	7·8	8·9	83·3
District	7·4	9·3	83·3

Exceptional character of Pináhat.

The rates assessed.

137. After the division of the cultivated area into the three important classes that I have been describing, and the determination of the areas falling under one or other heading, the next step in the process of assessment was to ascertain the rates that

should be assumed for a calculation of their value. In attempting to do this it is necessary to consider and assess separately the numerous subdivisions of these larger classes, which owe the difference in their relative values to the variation in the natural soil, and the presence or absence of irrigation As the number of the minor classes, into which it has been found necessary in every pargana to subdivide the main classes, was considerable, and it being my object now to compare the results arrived at in the nine different parganas, confusion will be best avoided by taking each class and considering its assessment separately.

The gonda, or home lands

Difference in natural soil eliminated by the use of manure.

138. Firstly then with regard to the *gonda* area: in this as in the manjha area the distinctions arising from a difference in the natural soil are relatively of little importance, the effect of manure and irrigation being to neutralise them. This has been the experience of all settlement officers. As Mr. Smith remarked in his report on Itimádpur—"In the *gonda* and *manjha* the long continued and uninterrupted use of manure and irrigation eliminate original differences due to natural soil, and near large villages I have often seen the fairest possible crops on land, which from its locality and appearance can have naturally been nothing but bhur or sand. As a fact rents on these two classes are not effected by anything but the distance from the site, and, therefore, my two first soils are simply gonda and manjha, with no other subdivisions than those of irrigated and unirrigated." So also Mr. Benson writing of Firozabad says: "Natural soils do not seem to affect *gonda* and *manjha* lands greatly, except in the rare cases of their being unirrigated or lying so low as to produce rabi only. Constant and careful attention and irrigation with manuring have a tendency to bring all soils within one classification to a good working composite loam." Nor is this the only reason which justifies the ignoring of the natural soils. As a matter of fact there is very little inferior soil in the *gonda* and *manjha* lands. Of the whole *gonda* area throughout the district no less than 94 per cent. is actually composed of *dumat* or *chiknot* or superior *khadir* soils, leaving only 6 per cent. of the inferior soils, *piliya* and *bhur*, and this proportion of the superior soils never falls below 79 per cent., which is the proportion in Pináhat, and is as high as 99 per cent. in Irádatnagar, Agra, and Khairagarh. Consequently, even did the classification of the natural soils affect the rent-rate, it would be justifiable and indeed necessary, to neglect it in calculating average rates to be assessed on a whole pargana. Irrigation, on the other hand, has a very marked effect on the value of the land in the home lands, more so, indeed, than in the outlying, and one that cannot be overlooked. The *gonda* area has, therefore, been subdivided into irrigated and dry lands, and separate rates assumed for the two subdivisions. Even in this respect also, widely different as are the values of the two classes, so large a proportion of the area is irrigated, that the average rate over the whole, wet and dry, is but four annas less than the irrigated rate of Rs. 8.

STATEMENT SHOWING THE ASSESSMENT OF THE GONDA.

Pargana.	Percentage of gonda.		Rates assumed.								
	Irrigated.	Dry.	Irrigated			Dry.			Average.		
Itimádpur ...	95	5	9	7	0	5	0	0	9	3	0
Firozabad ...	97	3	9	7	0	5	0	0	9	3	0
Pináhat ...	49	51	6	8	0	6	0	0	6	0	0
Fatehabad ...	90	10	7	8	0	6	0	0	7	6	0
Agra ...	92	8	8	14	0	7	0	0	8	13	0
Irádatnagar ...	95	5	9	0	0	7	0	0	8	13	0
Farah ...	94	6	7	0	0	4	8	0	6	12	0
Fatehpur-Sikri,	90	10	7	7	0	5	4	0	7	4	0
North Khairagarh.	95	5	7	12	0	5	4	0	7	4	0
South Khairagarh.	84	16	8	5	0	5	4	0	7	12	0
District ...	90	10	8	0	0	5	4	0	7	12	0

The effect of irrigation in manured lands.

Variation in the proportion of *irrigated* gonda in different parts of the district.

139. This preponderance of irrigated lands is remarkable generally, but in this connection I would call attention to a fact of some significance. The district (as I pointed out in my general description of it) is composed of three distinct parts, that north of the Jamna, that between the Jamna and Utanghan, and that south of the Utanghan In the first the proportion of the dry lands in the *gonda* varies from 3 to 5 per cent., in the second from 5 to 10 per cent., while in the third alone is it of serious importance, amounting to 10 per cent., in south Khairagarh, and actually exceeding the irrigated area in Pináhat. The significance of this fact becomes apparent when we note that the range of rent-rates for the most part follows the

same law, and that too not only for the average of both wet and dry rates, but also the irrigated rates alone. North of the Jamna this rate is Rs. 9-7-0, in the central tract it ranges from Rs. 7 to Rs. 9. This difference is, I think, to be attributed very much to the difference in the system of agriculture in vogue in the two tracts. Far greater attention and care is bestowed on the home lands north of the Jamna than south of that river. "Manure is much more *generally* used (in the cis-Jamna villages) than in the Duab districts" (Fatehabad report). Rates accordingly diverge more widely north of the Jamna, where the gonda rate is nearly three times the barha rate, than to the south, where it is generally only twice as high. In Pinahat we have an extreme instance of a *general* use of manure which, combined with difficulty in irrigation, brings down the rate for irrigated gonda to the minimum of Rs. 6-8-0. In South Khairagarh the rate again rises owing to the peculiarity in the irrigation of this pargana, which has been commented on (*vide* page 12), and owing to which the value of irrigated land exceeds that of dry lands, to a degree not met with elsewhere in the district. Over the district generally the rate for irrigated gonda is on an average Rs. 8 and for dry Rs. 5-4-0 an acre, which are equivalent to rates on the survey bigha of Rs. 4-8-0 and Rs. 3 respectively.

Subdivision of the gonda area.

140. It will be observed that in some parganas the gonda was divided into two classes, a separate rate being assumed for each, and some explanation of this difference of procedure is necessary. In Itimádpur and Firozabad the second class gonda includes the gonda areas in the ravine tract, the value of which both in respect to soil and facility of irrigation is very much inferior to that of similarly situated lands in the level uplands; but the total area so classed is so small that the average rate is scarcely affected. In the other parganas one general rate was assumed, except in Agra, assessed by Mr. Benson, and in Fatehpur-Síkri and Khairagarh assessed by myself. In Agra the area so classed was not large. My reason for drawing a distinction between first and second class gonda was given in my report on Fatehpur-Síkri. It was this, that "there is so great a difference between the quality and the rates of the gonda and manjha of the larger villages and those of smaller villages and hamlets, that any rate fixed on would of necessity have been only an average rate; that is, I should have been obliged to assess above the rate fixed on in the larger villages, and below it in other cases." This difference is practically one of procedure: by my method I anticipated what was postponed by the other assessing officers till they came to assess the individual villages. I think, however, the course I took in assessing hamlets separately was advantageous, in preventing any inequality wherever it became necessary to distribute the village revenue over the thokes and pattis in accordance with the soil rates, and saved a good deal of labour in the decision of enhancement cases.

The 'manjha' or middle lands.

141. Nearly all I have said with reference to the gonda area applies to the manjha. The variation in the rates in different parganas, the obliteration of the distinction between natural soils, the adoption of a single or double rates, all three features present themselves in the manjha as in the gonda, and for the same reasons. The preponderance of irrigated lands is still very great, though not quite so remarkable as in the gonda area. The fall in the value of the lands as the distance from the site increases is already much more marked in the trans-Jamna parganas than elsewhere, and is smallest in Pináhat. The preponderance of the better soils is very nearly as great as the gonda, amounting to 93 per cent. The average rates throughout the district are for irrigated manjha Rs. 6-6-0 for dry Rs. 4-12-0, about Rs. 3-10-0 and Rs. 2-10-0 per pakka bigha respectively.

STATEMENT SHOWING THE ASSESSMENT OF THE MANJHA.

Pargana.	Percentage of manjha.		Rate assumed.		
	Irrigated.	Dry.	Irrigated.	Dry.	Average
			Rs. a. p.	Rs. a. p	Rs. a. p.
Itimádpur ...	95	5	6 15 0	4 0 0	6 14 0
Firozabad ...	96	4	6 15 0	4 0 0	6 14 0
Pinahat ...	40	60	5 12 0	5 4 0	5 7 0
Fatehabad ...	83	17	6 4 0	5 4 0	6 1 0
Agra ...	90	10	6 14 0	6 0 0	6 13 0
Irádatnagar ...	86	14	7 0 0	5 4 0	6 12 0
Farah ...	81	19	5 0 0	3 12 0	4 11 0
Fatehpur-Síkri	83	17	5 14 0	4 6 0	5 10 0
North Khairagarh.	85	15	6 11 0	5 4 0	6 7 0
South ditto	72	28	6 14 0	3 15 0	6 3 0
District.	84	16	6 6 0	4 12 0	6 2 0

Statement showing the assessment of barha lands.

Pargana.	Irrigated rates.							Dry rates.							Average of all soils irrigated and unirrigated.
	Dumat.	Chiknot and mar.	Piliya.	Bhur.	Kakret and pakhra.	Khadir and kachhar.	Average.	Dumat.	Chiknot and mar.	Piliya.	Bhur.	Kakret and pakhra.	Khadir and kachhar.	Average.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Itimádpur	4 13 0	3 8 0	3 8 0	3 8 0	2 7 0	3 9 0	4 7 0	3 0 0	2 4 0	2 4 0	2 4 0	1 3 0	1 13 0	2 0 0	3 1 0
Firozabad	5 0 0	3 8 0	3 8 0	3 8 0	2 13 0	3 2 0	4 13 0	3 0 0	2 4 0	2 4 0	2 4 0	0 14 0	1 9 0	1 15 0	4 2 0
Pináhat	5 0 0	5 0 0	5 0 0	3 8 0	2 8 0	6 8 0	5 3 0	4 4 0	4 4 0	3 4 0	3 4 0	1 0 0	3 9 0	3 12 0	4 5 0
Fatehabad	5 0 0	5 0 0	3 8 0	3 8 0	2 8 0	5 14 0	4 14 0	4 0 0	4 0 0	2 8 0	2 8 0	1 0 0	3 3 0	2 15 0	3 5 0
Agra	5 5 0	5 0 0	3 8 0	2 8 0	2 0 0	5 13 0	5 4 0	3 15 0	4 0 0	3 0 0	1 12 0	1 0 0	4 11 0	3 7 0	4 9 0
Irádatnagar	5 3 0	4 12 0	4 0 0	4 0 0	4 0 0	4 11 0	5 3 0	4 7 0	3 0 0	3 0 0	...	...	2 6 0	3 12 0	4 8 0
Farah	4 5 0	4 0 0	3 8 0	3 8 0	...	4 10 0	4 5 0	2 15 0	2 10 0	2 4 0	2 4 0	1 0 0	3 6 0	2 12 0	3 5 0
Fatehpur-Sikri	4 15 0	6 2 0	4 6 0	4 6 0	...	...	5 0 0	3 13 0	5 4 0	2 10 0	1 5 0	...	...	3 11 0	4 4 0
North Khairagarh ...	5 11 0	7 0 0	4 6 0	4 6 0	...	...	5 11 0	3 15 0	4 6 0	1 12 0	1 5 0	...	...	3 12 0	4 10 0
South ditto	5 11 0	5 11 0	4 6 0	4 6 0	...	...	5 11 0	2 3 0	3 15 0	1 5 0	0 14 0	...	...	2 2 0	3 0 0

The 'barha' or outlying lands.

Importance of the difference in the natural soils.

142. When we pass to the outlying lands, commonly called *barha* or *har*, it is no longer possible to ignore the effect of the diversity of the soils, inoperative as that element was in the better cultivated lands. This is clear from the difference in the rates that were found prevalent for the various soils, a difference too great to be overlooked even in the fixation of pargana rates. That even irrigation alone goes some way towards lessening the effect of this diversity of soil, will be seen from the fact that the difference between the irrigated rates of the various soils in the individual parganas is much less than the difference between the dry rates. For instance the rate for irrigated dumat is less than half as high again as the rate for irrigated bhur, but, when dry, dumat pays at least twice as much as bhur. There are of course considerable variations in the rates for the same soil in the different parganas, *especially in the case of the dry lands*; that the irrigated rates are less divergent is only another example of the equalising effect of irrigation.

The rates assessed on irrigated lands.

143. The statement given on page 84 shows the various rates assumed for the different soils in the *barha*. In the irrigated lands, the proportion of irrigated *dumat* is generally so large that the rate for that soil practically determines the average rate for the whole irrigated *barha*. The only exceptions to this rule are, 1st, Itimádpur where the proportion of the sandy soils is unusually large, and thus the general rate falls a good deal below the dumat rate, and, 2nd, Pináhat where the superiority of the large kachhar area raises the general rate above it. This general rate varies between the low rates of Rs. 4-5-0 in Farah and Rs. 4-7-0 in Itimádpur (Rs. 2-8-0 a bigha) to Rs. 5-11-0 (Rs. 3-4-0 a bigha) in Khairagarh, a difference of 30 per cent. In Itimádpur this is owing to the large area of sandy and raviny land, in Farah to the great inferiority in the character of the irrigation (see page 11); the high rate in Khairagarh is to be attributed to the character of the irrigation which, as I have explained (page 12), pushed up the value of the small area of irrigated land. Taking the several soils separately, the rate for irrigated *chiknot* varies from Rs. 3-8-0 to Rs. 7. The value of this soil depends almost entirely on its locality; small isolated patches being of little value, while large tracts bordering a jhil and producing sugarcane, &c., (as is the case in north Khairagarh) are of great fertility. The rate for irrigated *piliya* is generally Rs. 3-8-0 though it runs as high as Rs. 5 in Pináhat. The *piliya* area in Fatehpur-Síkri and Khairagarh is so small in extent that the rate there assessed (Rs. 4-6-0) is very exceptional. Irrigated *bhur* pays the same rates as irrigated *piliya*. Irrigated *kakret* or *pakhar* land in the ravines and more or less spoilt by kankar is a poor soil rating at an average of Rs. 2-10-0 (Re. 1-8-0 a bigha). The average rate for irrigated kachhar or khadir ranges between very wide limits. The variety in the character of these lands in the different parts of the districts has been fully commented on (page 8-10), and the rates necessarily follow their diversity.

The rates for dry lands.

144. Where there is no irrigation, the rates of the different soils in the same pargana, the same soil in different parganas, and the average rates for all soils in the different parganas, range between far wider limits than separate the irrigated rates The average dry rate thus is about Rs. 2 in Itimádpur, Firozabad, and South Khairagarh, and rises as high as Rs. 3-12-0 in Pináhat, Irádatnagar, and North Khairagarh, a difference of nearly 90 per cent., three times as great as the difference with irrigation. Omitting the dry rates of South Khairagarh, which are exceptional dumat, varies least of all, ranging between Rs. 3 and Rs. 4-7-0. Piliya and bhur rates as high as Rs. 3-4-0 in Pináhat, but the rate drops for the former to Re. 1-12-0 and for the latter as low as Re. 1-5-0. Chiknot and kachhar vary very much for the reasons given above. Kakret is almost invariably rated at Re. 1. The average rate for the outlying lands, without having regard to irrigation, varies from Rs. 3, the rate in South Khairagarh and Itimádpur, to Rs. 4-10-0, the rate in Agra and North Khairagarh.

Incidence of the assumed rates on the total areas irrigated and dry.

145. The statement in the margin shows at what rate the total rentals calculated at the various assumed rates fall on the irrigated, unirrigated, and total cultivated acres. For the whole district the average rate at which the cultivated area has been assessed is Rs 4-7-10 an acre, which is little over Rs. 2-8-0 a survey bigha. The irrigated rate is Rs. 5-12-3 per acre (or about Rs. 3-4-0 a bigha), nearly 28 pe cent above the general rate. The dry rate is Rs. 3-4-4 (a little below Rs. 2 a bigha) and is just the same proportion below the general rate as the irrigated is above it; and is rather more than half (57 per cent.) of the irrigated rate. The ratio, however, between the irrigated and unirrigated rates varies very largely from pargana to pargana, and it is of importance to notice it, as it depends on and gives evidence of the peculiarities of cultivation and irrigation, which have been commented on as characteristic of the four natural divisions of the district.

INCIDENCE OF ASSUMED RATES.

Pargana.	Average per acre.								
	Irrigated.			Unirrigated.			Cultivated.		
	Rs.	a	p.	Rs.	a	p	Rs	a	p.
Itimádpur	5	4	1	2	1	7	4	5	7
Firozabad	5	8	7	2	2	4	5	0	0
Pináhat	5	5	6	3	13	7	4	3	0
Fatehabad	5	5	9	3	1	2	4	6	4
Agra	5	14	8	3	10	0	5	2	2
Irádatnagar ...	6	0	9	3	14	11	5	2	10
Farah	4	14	2	2	12	10	3	12	3
Fatehpur-Sikri ...	5	5	11	3	12	0	4	8	9
North Khairagarh ...	6	2	11	3	13	3	4	15	9
South ditto ...	6	6	2	2	4	2	3	10	0
Tract.									
Trans-Jamna ...	5	6	6	2	1	10	4	11	5
Jamna-Utanghan Duab	5	9	2	3	6	5	4	9	10
Pináhat ...	5	5	6	3	13	7	4	3	0
South Khairagarh ...	6	6	2	2	4	2	3	10	0
District	5	12	3	3	4	4	4	7	10

(1) In the trans-Jamna parganas the dry rate is 40 per cent. of the irrigated rate.
(2) Between the Jamna and the Utanghan „ 61 „ „
(3) South of the Utanghan in Pináhat „ 72 „ „
(4) „ „ in Khairagarh „ 35 „ „

South Khairagarh then resembles the trans-Jamna parganas in the great relative inferiority of its dry lands; but, as we have seen, here the resemblance ends, for while Khairagarh has 67 per cent. of the dry or inferior land, the trans-Jamna tract has less than 23 per cent. So that, notwithstanding higher rates for both irrigated and dry land, the average rate on the whole cultivated area in the former tract is little more than three-fourths of what it is in the latter. In the main portion of the district the two rates approximate much more closely, dry lands being assessed at about two-thirds of the rate for irrigated lands, and this proportion is exceeded in Pináhat, in which pargana one of the most remarkable features is the little difference between these two classes of land.

146. The highest rate on irrigated land is met with in South Khairagarh, the lowest in Farah. Irádatnagar closely followed by Pináhat pays the highest dry rate, and Itimádpur the lowest. Irádatnagar also pays the highest all-round rate, while the lowest has been assessed on South Khairagarh. It may here be mentioned that at last settlement Mr. Mansel, who fixed uniform soil rates for the whole of the district, assessed dry lands throughout at half irrigated rates. It is curious, therefore, to observe that though this is not far from the mark for the district as a whole, yet when applied to individual parganas this principal would have led to very inaccurate results, as the dry lands would have been as much under-rated in some parts as they were over-rated in other parts of the district. It is, therefore, fortunate that, as Mr. Smith remarks in his report on pargana Pináhat, "the assessments were not influenced by the rates at all."

Basis on which the assumed rates were founded.

147. It remains to give some account of the process by which these assumed rates were arrived at, or as they were avowedly based on 'prevalent rates,' to explain in what way those prevalent rates were ascertained. It will be advisable to quote the explanations given by the different assessing officers of their procedure in this matter. The late Mr. Smith in his report on Itimádpur, the first pargana he assessed in this district, explains his system as follows. "The process by which these proposed rates have been determined is the same as I have elsewhere adopted, and is that laid down as necessary in the Board's settlement circular. First, a general knowledge of the

rate prevailing for each class of soils is obtained by constant and unceasing inquiries during inspection from cultivators, zamindars, and patwáris. The knowledge thus acquired is then tested by reference to the patwáris books showing the rents for particular holdings. Everywhere in Agra rents are recorded in lump, and it is, therefore, impossible in any but a few cases to discover the actual rental paid for a particular class of soil. But in every village a rough rate for, at all events, the larger soil classes is known and used, and analysis of numerous holdings will show how far it is followed in fact. It often happens, too, that a cultivator has only one class of soil in his holding, in which case the rate is obvious. When these investigations have been pursued in every village and in many holdings in each village, average rates can be deduced with tolerable confidence. Of course mathematical accuracy is out of the question, but an approximation to truth may fairly be claimed." On this system that officer proceeded in assessing the other parganas he inspected, and it will be seen that it was followed also by Mr. Benson and myself in the rest of the district.

148. Mr. Benson in his report on Firozabad (page 47) says. "The general prevailing rates and the rates paid by tenants holding in particular tracts or hars were noted at the time of inspection." He then gives a sketch of the "general notion given of prevailing rates by verbal inquiries," showing, as clearly as can be shown on paper, the process by which that general notion was obtained, and concludes as follows. "Having these general ideas, and in most villages a few special cases, noted at inspection to work on, I proceeded to examine the jamabandis of nearly all the villages in the pargana in detail, first selecting cases where a tenant held lands of one kind only, and so obtaining positive indisputable rates, and next analyzing holdings consisting of various kinds, applying either the rates already obtained as above, or the generally recognised rates, to the *gonda* and *manjha* and so deducing the *har*, or *vice versâ*, as the materials at hand afforded opportunity. Rejecting extreme cases, I thus determined what appeared to be the average prevailing rates in each village, and tested them by applying them to the various kinds of soil, and comparing the result with the total jamabandi. In determining these prevailing rates I have of course been mainly guided by the cases of villages where the rise of rental has had free play, neglecting those where village custom and the orders of the settlement officer at last settlement have maintained the 'patoti' unchanged since that date." And again in his report on the Agra (Hazur) tahsil (page 33), he adds the following remarks. "In selecting the proposed rates I have been guided by the prevailing rates found to exist on a careful examination of the 'nikásis,' and inquiry into the rental condition of the different classes of land. In determining prevailing rates I have of necessity neglected those villages where the whole cultivation is in the hands of proprietors and where, as in several instances, there are large tracts so held, I have had recourse to the recorded subrental to ascertain the prevailing rates; but those subtenants were not real 'shikmis' but old tenants of the zamindar's erroneously recorded sir. In other cases the rentals of occupancy tenants who have submitted to reasonable enhancements, and of tenants-at-will, have proved the basis of prevailing rates."

149. My own experiences were as follows. Coming from the assessment of villages in the Farukhabad and Cawnpore districts, where the rents paid by the tenants had been distributed, either by village custom or with more or less accuracy by the patwári, field by field, I felt much at a loss in this district where lump rents are *universal*. It was impossible to give or obtain figures showing the exact sum paid for all the tenant-held land of each class of soil. The rent actually paid for any individual class could only be shown for the area comprised in those holdings which were altogether composed of that class of soil. This area was necessarily very limited for any but the soils prevailing to a large extent. Fortunately these soils are the most important, and the letting value of the other soils could be deduced by analogy without much risk of error, the relative values of the different classes of soil having been fully ascertained in the course of inspection. I must, however, repeat that the basis of my rates, as of those of my predecessors, was the scale of rates which my inquiries, village by village,

and from all classes of agriculturists, ascertained to be prevalent; and that the statistics obtained as I have explained were made use of to test, or, if need were, to correct the general notions I had formed at inspection. In conclusion I will quote the explanation I gave of my procedure in my report on Fatehpur-Sikri (page 28). "It is necessary to point out the difficulties that surround the attempt to show the actual rates for the different classes of soil. In the first place *all rents* are in lump sums, and are not distributed field by field, so that we are reduced to the rents of those tenants whose fields are, for the most part, exclusively in one or other class of soil: this limits very greatly the number of occupancy rents that are available for our purpose. Fortunately this is of less importance, because it is chiefly the rents of tenants-at-will and sub-tenants that must supply the standards we require; and the holdings of those last are smaller and more frequently composed of one class of soil. In the second place, the proportion of the cultivated area paying real rents is very limited. It has been shown how" (I here substitute statistics applying to the district generally) "23½ per cent. of the area is held in sír; its rents are no guide: 52 per cent. is held by occupancy tenants; these rents have been artificially kept down by the leases granted at last settlement for the whole term, so that they give no true estimate of the letting value of the land. We are thus reduced to the area held by the tenants-at-will which is but 22½ per cent. of the cultivated area, besides the limited portion held by subtenants in sír and under other tenants. Those facts show how limited are the statistics upon which we can draw for information as to the actual rates paid for the various soils, and it is thus only for the larger or more important subdivisions that the instances ascertainable are sufficiently numerous to form a safe basis on which to ground comparisons. The rates payable for the smaller subdivisions can only be arrived at by analogy."

Deviation from the assumed pargana rates in the assessment of individual villages.

150. The rates that have been commented on are the average rates assumed for the assessment of the different soils over a whole pargana. But, in assessing individual villages, the fact that they are "average" rates was fully borne in mind. Many circumstances affect the standard of rents paid or payable in a village, and for these allowance has to be made by modifying the pargana rates. Rents will be lower, and lower rates must be assessed, in villages where the lands are inferior, owing to some local or accidental peculiarity, where the population is scanty, or the market very distant; where the tenants are composed of the less industrious castes who cultivate with less skill, or where, as is often the case, they are chiefly old proprietors (or their descendants) who have lost their proprietary rights and have been allowed to cultivate at very lenient rates; further, within any particular village there may be some accidental inferiority in one or other of the separate soils. On the other hand, rents will rise above the average under opposite circumstances, and higher rates must be assumed in determining the value of the land. The following table shows the highest and lowest rates assumed for the most important soils in individual villages side by side with the pargana rate for the soil, and the wideness of those limits shows that the assessing officer did not, by any blind adherence to the pargana rates, ignore the influence exercised by these various elements:—

Table showing the variations from the pargana standard rates in the assessment of individual villages.

Pargana.	Irrigated.									Dry.		
	Gauta.			*Manjha.*			*Barha dumat.*			*Barha dumat*		
	Maximum.	Minimum.	Pargana rate.	Maximum.	Minimum.	Pargana rate.	Maximum.	Minimum.	Pargana rate.	Maximum	Minimum.	Pargana rate.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Hímádpur ...	15 12 0	6 0 0	9 7 0	10 8 0	5 0 0	6 15 0	8 0 0	3 8 0	4 13 0	4 0 0	2 4 0	3 0 0
Firozabad ...	14 0 0	5 0 0	9 7 0	8 8 0	4 0 0	6 15 0	7 0 0	3 8 0	5 0 0	4 8 0	2 0 0	3 0 0
Pinahat ...	9 0 0	4 8 0	6 8 0	8 0 0	3 12 0	5 12 0	7 0 0	3 0 0	5 0 0	6 0 0	2 0 0	4 4 0
Fatehabad ...	10 8 0	4 0 0	7 8 0	8 0 0	4 0 0	6 4 0	6 4 0	3 0 0	5 0 0	4 8 0	2 0 0	4 0 0
Agra ...	14 8 0	5 0 0	8 14 0	10 0 0	4 0 0	6 14 0	9 0 0	3 8 0	5 5 0	0 8 0	2 8 0	3 15 0
Iradatnagar ...	12 0 0	0 0 0	9 0 0	9 12 0	5 0 0	7 0 0	7 0 0	4 0 0	5 3 0	5 4 0	1 8 0	4 7 0
Farah ...	10 8 0	4 12 0	7 0 0	8 0 0	4 0 0	5 0 0	5 8 0	3 0 0	4 5 0	4 0 0	1 8 0	2 15 0
Fatehpur-Sikri ...	8 12 0	4 6 0	7 7 0	7 14 0	4 6 0	5 14 0	6 2 0	3 15 0	4 15 0	5 4 0	2 10 0	3 13 0
Khairagarh ...	10 8 0	5 4 0	8 0 0	8 12 0	4 6 0	6 12 0	7 14 0	3 8 0	5 10 0	6 2 0	0 14 0	2 14 0

151. It might, however, appear open to question in the face of such a wide range of variation, whether the so called pargana rates were really average rates as they are represented to be. Any doubt on this point is set at rest by a comparison of the pargana rentals derived from the pargana rates, with the sum of the rentals calculated on the basis of the rates assumed as suitable to the peculiarities of the individual villages. The table in the margin shows that the total rental of the whole district, calculated for each pargana at the rates sanctioned for the pargana amounts to Rs. 36,11,612, while the total of the assumed rentals calculated village by village amounts to Rs. 36,09,050, a difference of Rs. 2,562, *less than one per thousand.* As a general rule there is no difference of any importance, and even in Fatehpur-Síkri, where the divergence is greatest, it only amounts to 2 per cent. The villages were assessed one by one solely with regard to their individual characteristics; that the results by the two methods agree so closely is good evidence, that the average rates assumed for the parganas fairly represented the standard towards which rents tend.

Pargana.	Rental at the sanctioned pargana rate.	Total of village assumed rentals.
Itimádpur	4,28,258	4,26,818
Firozabad	4,52,751	4,48,120
Pináhat	4,16,012	4,12,392
Fatehabad	3,92,584	3,90,613
Agra	4,11,220	4,10,571
Irádatnagar	4,01,257	4,03,700
Farah	3,70,571	3,75,181
Fatehpur Síkri	3,68,556	3,76,300
Khairagarh	3,67,403	3,65,355
District	36,11,612	36,09,050

152. I have shown (page 64) how far the results calculated at the sanctioned pargana rates varied from the actual rentals, recorded and corrected; and again to what extent the estimated assets of each pargana varied from the rental at sanctioned rates. It only remains to show what proportion the revenues finally assessed by the settlement officer bore to those estimated assets, in other words to what extent the assessing officer diverged from a strict determination of the demand at 50 per cent. of the estimated assets. For this purpose I give in the margin a table showing the revenues for each pargana at half estimated assets and the revenues actually assessed together with the difference actual and relative.

Variation in final assessments from the half assets rule.

Pargana.	Revenue at half estimated assets.	Revenue fixed by settlement officer.	*Difference.*	
			Actual.	Per cent.
Itimádpur ...	2,13,409	2,13,800	+391	0·2
Firozabad ...	2,24,460	2,24,460	...	...
Pináhat ...	2,06,196	2,05,990	−206	0·1
Fatehabad ...	1,95,306	1,96,230	+924	0·5
Agra ...	2,05,258	2,06,100	+842	0·4
Irádatnagar ...	2,01,850	2,01,880	+ 30	...
Farah ...	1,87,590	1,88,640	+1,050	0·6
Fatehpur-Síkri ...	1,88,150	1,91,810	+3,660	2·0
Khairagarh ...	1,82,678	1,78,750	−3,928	2·1
District ...	18,04,897	18,07,660	+2,763	0·15

153. It will be seen that the 50 per cent. standard was practically maintained in all except the pargana of Fatehpur-Síkri and Khairagarh. These two pargana show *comparatively* (though not actually) a considerable deviation from that standard, and as they were assessed by myself the fact calls for some explanation from me. It will be observed that the divergence is in opposite direction. The conditions of the two parganas were in fact precisely opposite in respect to that element on which it depends whether the demand should be fixed precisely at the half assets, or above or below it. That element is of course the nature of the proprietary bodies; these may be very numerous, the estate of each individual being small, or there may be large estates held by single proprietors or small families. Now in Fatehpur-Síkri the number of co-sharers is about 4,200, whereas in Khairagarh it is 6,890, the former holding on a average 23 acres of assessable land, and the latter only 18 acres. In the former, indeed, there are a very large number of mahál held by single owners; in the latter there are a very large number held by very numerous proprietary bodies. It followed necessarily that in Fatehpur-Síkri the assessments ran somewhat above the half assets standard, while in Khairagarh they fell equally below it. After all too the divergence is really very small; in Fatehpur-Síkri the demand fixed was barely 51 per cent., and in Khairagarh just 49 per cent. of the assets. Over the district as a whole the revenue demand of Rs. 18,03,980 as fixed by the settlement officers varies by only Rs. 2,763, or (just Rs. 1½ per mille) from half the estimated assets which amounted to Rs. 36,09,050.

PART V.

FINANCIAL RESULTS.

Increase in the revenue demand.

154. The final result of the operations of the settlement under report will best appear from the following statement :—

Pargana.	Expiring revenue of last settlement	Revenue assessed by settlement officer.	Changes by order of the Board of Revenue. Increase.	Changes by order of the Board of Revenue. Decrease.	Other subsequent changes. Increase.	Other subsequent changes. Decrease.	Revenue finally fixed.	Increase of column (8) over column (2) Actual.	Increase of column (8) over column (2) Per cent.
Itimádpur	1,83,672	2,13,800	...	...	...	(a) 600	2,13,200	29,528	16
Firozabad	2,03,989	2,24,460	...	...	(b)	(a) 200	2,24,260	20,271	10
Pináhat...	1,75,575	2,05,990	...	...	2,430	...	2,08,420	32,845	19
Fatehabad	1,81,168	1,96,230	40	100	...	...	1,96,170	15,002	8
Agra	1,84,516	2,06,100	...	590	...	(c) 80	2,05,430	20,914	11
Irádatnagar	1,85,824	2,01,880	2,250	3,410	(d) 20	...	2,00,740	14,916	8
Farah	1,69,604	1,88,640	...	...	...	...	1,88,640	19,036	11
Fatehpur-Síkri	1,81,584	1,91,810	...	1,870	(e) 510	...	1,90,450	8,866	4
Khairagarh	1,63,412	1,78,750	...	...	...	...	1,78,750	15,338	9
District	16,29,344	18,07,660	2,290	5,970	2,960	880	18,06,060	1,76,716	11
Deduct villages transferred to Muttra.	84,932	97,630	...	...	...	...	97,630	12,698	15
Agra District exclusive of villages added from Jalesar.	15,44,412	17,10,030	2,290	597	2,960	880	17,08,430	1,64,018	11

There has thus been an increase of Rs. 1,76,716 on the demand previous to revision, a rise of 11 per cent. The rate of enhancement varies from a maximum of 19 per cent, the amount in Pináhat, to a minimum of 4 per cent in Fatehpur-Síkri.

Incidence of the revised revenue.

155. The incidence of these revised revenues is compared in the following statement with that of the revenue previous to last settlement, and the revenue assessed at last settlement on the areas at that date, and with that of the revenue previous to the present revision on the existing areas :—

Statement showing the incidence of the revenue on the total, culturable, and cultivated areas.

A. Revenue previous to last settlement. } Calculated on areas of last settlement.
B. „ fixed at ditto }
C. „ previous to present settlement } ditto present ditto
D. „ fixed at ditto }

Pargana.	On total area. A.	B.	C.	D.	On culturable area. A.	B.	C.	D.	On cultivated area. A.	B.	C.	D.
			Rs. a. p.	Rs. a. p	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p	Rs. a. p.	Rs. a. p.
Itimádpur ..	Not ascertainable.	Ditto.	1 5 10	1 8 5	2 2 7	1 14 4	1 10 9	1 15 2	2 4 7	2 0 0	1 14 0	2 2 11
Firozabad ..			1 9 11	11 1	2 2 6	2 2 3	2 0 9	2 4 1	2 4 7	2 4 4	2 3 10	2 7 7
Pináhat ...			0 15 8	1 2 4	1 14 5	1 10 9	1 8 1	1 12 3	2 0 6	1 12 8	1 11 10	2 0 8
Fatehabad ..			1 5 11	1 7 9	2 0 9	1 15 11	1 12 4	1 14 8	2 2 0	2 1 2	2 0 6	2 3 2
Agra ...			1 11 10	1 15 0	2 6 8	2 3 2	2 0 11	2 4 9	2 10 8	2 7 0	2 5 2	2 9 5
Irádatnagar ...			1 13 3	1 15 7	2 3 8	2 3 3	2 0 10	2 3 7	2 8 0	2 7 3	2 6 1	2 9 2
Farah ..			1 5 9	1 8 1	1 15 9	1 11 5	1 7 10	1 10 5	2 3 0	1 14 4	1 11 7	1 14 8
Fatehpur-Síkri.			1 12 0	1 13 3	1 15 2	2 0 8	1 13 10	1 15 2	2 4 11	2 6 8	2 3 10	2 5 6
Khairagarh ...			1 3 0	1 4 9	1 8 0	1 7 8	1 5 7	1 7 7	1 14 2	1 13 9	1 13 6	2 0 3
District ...			1 6 7	1 9 1	2 0 10	1 15 6	1 11 8	1 14 8	2 3 10	2 2 5	2 0 6	2 3 11

NOTE.—(*a*.) Life grants to grantee for loyalty in 1857.
(*b*.) Assessment of two villages belonging to Rajah Dinkar Rao, previously free of revenue.
(*c*.) Remission of revenue erroneously assessed on two muáfi plots.
(*d*.) Assessment of a plot of land omitted by mistake.
(*e*.) Lapse of life grant owing to death of grantee.

NOTE.—The figures for last settlement (columns A. and B). are taken from appendix to Mr. Manael's report.

156. The figures given on page 90 show the final revenues ; but in all but three parganas, *viz.*, Itimádpur, Firozabad, and Agra progressive revenues were fixed for some or other of the villages, so that the pargana revenues are also progressive. The parganas too were assessed in different years, and the revised demand accordingly began to take effect from different dates. But the statement here given shows both the progressive revenues of the various parganas, and the gradual rise in the revenue of the area under report commencing with 1284 fasli (1876-77), the last year in which the old demand was paid throughout the district up to 1291 fasli (1883-84), the year in which the full demand will be payable. Progressive revenues.

Pargana.	*Progressive Revenues.*							
	1284 Fasli.	1285 Fasli.	1286 Fasli.	1287 Fasli.	1288 Fasli.	1289 Fasli.	1290 Fasli.	1291 Fasli to end of settlement.
		A. B.						
Itimádpur ...	1,83,672	2,13,200	2,13,200	2,13,200	2,13,200	2,13,200	2,13,200	2,13,200
		A. B.						
Firozabad ...	2,03,989	2,24,260	2,24,260	2,24,260	2,24,260	2,24,260	2,24,260	2,24,260
			A.		B.			
Pináhat ...	1,75,575	1,75,575	2,08,240	2,08,290	2,08,420	2,08,420	2,08,420	2,08,420
			A.		B.			
Fatehabad ...	1,81,168	1,81,168	1,95,670	1,95,870	1,96,070	1,96,070	1,96,070	1,96,070
			A. B.					
Agra ...	1,84,516	1,84,516	2,05,430	2,05,430	2,05,430	2,05,430	2,05,430	2,05,430
			A.					B.
Irádatnagar ...	1,85,824	1,85,824	1,98,630	1,99,330	1,99,940	2,00,540	2,00,640	2,00,740
			A.		B.			
Farah ...	1,69,604	1,69,604	1,88,390	1,88,510	1,88,640	1,88,640	1,88,640	1,88,640
				A.		B.		
Fatehpur-Síkri ...	1,81,584	1,81,584	1,81,584	1,86,110	1,89,180	1,90,450	1,90,450	1,90,450
				A.				B.
Khairagarh ...	1,63,412	1,63,412	1,63,412	1,68,540	1,74,980	1,78,220	1,78,650	1,78,750
District ...	16,29,344	16,79,143	17,78,816	17,89,540	18,00,120	18,05,230	18,05,860	18,06,060

(A). In this year the new revenue first came into force. (B). In this year the full demand will be reached.

Statement showing the yearly increasing revenues of the district owing to the gradual revision of assessment and the progressive revenues in the different parganas under the new distribution.

Tahsil.	A. Revenue for 1284 fasli (or) 1876-77.	Revenue for 1285 fasli (or) 1877-78.	Revenue for 1286 fasli (or) 1878-79.	Revenue for 1287 fasli (or) 1879-80.	Revenue for 1288 fasli (or) 1880-81.	Revenue for 1289 fasli (or) 1881-82.	Revenue for 1290 fasli (or) 1882-83.	B. Revenue for 1291 fasli (or) 1883-84.	Remarks.
Itimádpur ...	1,83,672	2,13,200	2,13,200	2,13,200	2,13,200	2,13,200	2,13,200	2,13,200	
Firozabad ...	2,03,989	2,24,260	2,24,260	2,24,260	2,24,260	2,24,260	2,24,260	2,24,260	
Pináhat ...	1,75,575	1,75,575	2,08,140	2,08,290	2,08,420	2,08,420	2,08,420	2,08,420	
Fatehabad ...	2,28,388	2,28,388	2,49,470	2,50,070	2,50,680	2,51,000	2,51,200	2,51,200	
Agra ...	2,08,468	2,08,468	2,28,330	2,28,330	2,28,330	2,28,330	2,28,330	2,28,330	
Fatehpur-Síkri ...	2,82,266	2,82,266	2,88,844	2,93,490	2,96,690	2,97,960	2,97,960	2,97,960	
Khairagarh ...	2,62,054	2,62,054	2,68,842	2,74,270	2,80,910	2,84,430	2,84,860	2,85,060	
Total ...	15,44,412	15,94,211	16,81,086	16,91,910	17,02,490	17,07,600	17,08,230	17,08,430	
Villages transferred to Muttra.	84,932	84,932	97,630	97,630	97,630	97,630	97,630	97,630	
Total ...	16,29,344	16,79,143	17,78,716	17,89,540	18,00,120	18,05,230	18,05,860	18,06,060	

NOTE.—A. This was the last year in which the old demand was taken throughout the district.
B. In this year the full demand will have been reached throughout the district.

The actual annual increment in the demand for the whole district is as follows :—

	Rs.	Rs.
Revenue payable under former settlement in 1284 fasli,	...	16,29,344
Increase in 1285 fasli	49,799	
Further „ „ 1286 „	99,673	
„ „ „ 1287 „	10,724	
„ „ „ 1288 „	10,580	
„ „ „ 1289 „	5,110	
„ „ „ 1290 „	630	
„ „ „ 1291 „	200	1,76,716
Full demand payable in 1291 fasli (1883-84) A. B.	...	18,06,060

By the time the full standard is reached, *viz.*, by July, 1884, the total additional revenue that will have been collected in consequence of the present revision will have amounted to Rs. 10,59,361.

The cost of the settlement as shown on page 95 has been Rs. 7,06,951, so that it will have been more than recouped by that date.

For the convenience of future reference I have given a statement showing the change in the demand and the progressive revenues, as calculated for the parganas under the recent redistribution. This of course is exclusive of the revenues of the villages transferred to Muttra : otherwise the figures agree with those already given.

Assessment of revenue-free lands for the calculation of local cesses.

157. Besides the assessment of land paying revenue to Government, all other land exempt from that payment has been assessed in order to supply a basis for the calculation of local cessess levied at a percentage of the estimated revenue. It will also serve to show the amount of revenue which has been alienated from the State :—

Statement showing the valuation of the land for the assessment of local cesses.

Pargana.	Final revenue of lands paying revenue to Government.	Revenue of lands of which the revenue is assigned.	Estimated revenue of revenue-free villages.	Estimated revenue of revenue-free patches.	Total.
	Rs.	Rs.	Rs.	Rs	Rs.
Itimádpur	2,13,200	°	6,650	...	2,19,850
Firozabad	2,24,260	...	200	...	2,24,260
Pináhat	2,08,420	25,730	12,800	665	2,47,615
Fatehabad	2,51,200	...	...	...	2,51,200
Agra	2,28,330	8,860	12,800	2,428	2,52,418
Fatehpur-Síkri	2,97,960	1,620	1,500	1,470	3,02,550
Khairagarh	2,85,060	5,360	1,350	327	2,92,097
District	17,08,430	41,570	35,300	4,890	17,90,190

NOTE.—In this statement the new distribution of the parganas is followed, and the 84 villages transferred to Muttra have been omitted.

Thus in the district as it now stands, exclusive only of the villages added from Jalesar, the revenue that would be payable to the State on account of the revenue-free area amounts to Rs. 81,760, nearly 5 per cent. of the demand fixed for the assessable area. Of this Rs. 81,760, Rs. 41,570 is paid by zamindars to the assignees of the Government rights. The amount of the local cess calculated at 10 per cent. is for the whole district Rs. 1,79,019.

Instalments of the revenue.

158. The dates fixed for the payment of the instalments of the annual revenue under last settlement were as follows :—

Kharíf ... 1st instalment, 15th November ; 2nd instalment, 15th December.
Rabi ... ditto, 1st May : ditto, 1st June.

Under the rules contained in notification No. 1979A., dated 28th September, 1875, it became necessary to fix the dates in accordance with the dates of the several harvest five weeks after each, allowing three weeks after the payment of their rents

by the occupancy tenants, who in their turn were to be allowed fifteen days after the harvest within which to pay their rents. The first point, therefore, was to fix on the dates on which the several harvests are usually gathered. It was found that in this respect there was so little variation in the different parganas that the same dates were fixed throughout the district. The dates fixed hitherto were too early to satisfy the conditions laid down in the notification quoted above. The amount of indigo, maize, and rice grown in any pargana is too small to call for a special instalment for that harvest. There remain the ordinary early and later crops of the kharíf; the former being bajra and pulses; the latter juar and cotton. The harvesting of the early crops runs on through October and sometimes into November: and the 31st October was decided on as the date of the early kharíf harvest. The harvesting of the later crops extends over a lengthy period: although most of the juar is harvested in November, and the picking of the cotton commences in that month, yet the latter runs on into January; so that, *considering that cotton is the rent paying crop*, it was determined to fix the 15th December as the average date for the later kharíf. For the rabi it was held sufficient to have a single instalment only. Barley and gram begin to be cut at the end of March, and the wheat is being reaped till the end of April: the 15th April was taken as a mean date for the rabi harvest. In accordance with these harvest dates, the dates for the payment of the revenue instalments were fixed five weeks later in each case; and the original proposition was as follows:—

Kharíf ... 1st instalment, 6th December; 2nd instalment, 21st January.
Rabi ... Single instalment, 21st May.

This proposal was so far modified by the orders of the Board of Revenue that the date for the rabi instalment was put forward to the 1st June.

159. The next step was to determine the amount of which each instalment was to consist. These amounts could in the first instance only be roughly estimated for the different parganas: the amounts, as finally determined, had to be ascertained by first fixing the instalments for each individual village. The statement here given shows the result in the nine old parganas.

Statement showing the instalments by which the revenue is payable.

Pargana.	Revenue.	*Kharif.*			*Rabi.*	Remarks.
		First instalment 6th December.	Second instalment 21st January.	Total.	1st June.	
	Rs.	Rs.	Rs	Rs.	Rs.	
Itimádpur ...	2,13,800	40,167 (3)	79,340 (6)	1,19,507 (9)	94,293 (7)	The figures within brackets denote the proportion of the several instalments to the total revenue.
Firozabad ...	2,24,460	31,226 (2)	81,637 (6)	1,12,863 (8)	1,11,597 (8)	
Pináhat	2,08,420	56,044 (4¼)	71,287 (5¾)	1,27,331 (10)	81,089 (6)	
Fatehabad ...	1,96,170	43,635 (3½)	66,015 (5½)	1,09,650 (9)	86,520 (7)	
Agra	2,05,430	30,961 (2½)	83,248 (6¾)	1,14,209 (9)	91,221 (7)	
Irádatnagar ...	2,00,740	32,751 (3)	80,221 (6)	1,12,972 (9)	87,768 (7)	
Farah	1,88,640	28,768 (3)	77,293 (6)	1,06,061 (9)	82,579 (7)	
Fatehpur-Síkri ...	1,90,450	15,237 (1)	70,088 (6)	85,325 (7)	1,05,125 (9)	
Khairagarh ...	1,78,750	21,517 (2)	58,190 (5)	79,707 (7)	99,043 (9)	
District	18,06,860	3,00,306 (2½)	6,67,319 (6)	9,67,625 (8½)	8,39,235 (7½)	

The variation from pargana to pargana necessarily follows the difference in the character and relative extent of the principal crops. Thus the large area under bajra and the pulses in Pináhat and Fatehabad renders the first kharíf instalment very large in those parganas: the reverse is the case with Fatehpur-Síkri, where there is

comparatively little of those crops. The amount of the second instalment is much more uniform, the combined area under juar and cotton being a more constant quantity. The rabi instalment is generally seven annas in the rupee; it rises to nine annas in Fatehpur-Sikri with its large rabi area, and in Khairagarh with an unusual extent of double cropping. The kharif instalments for the whole district are to the rabi instalment in the ratios of 17 to 15. The area under kharif crops is, however, as 15 to 11 in comparison with the rabi area. The difference in the two ratios arises from the necessity of distinguishing between the characters of the two classes of crops; the kharif produce being to a great extent required for the support of the cultivators and their cattle, while the rabi crops are the more available to meet the demands for rent.

160. Engagements for the payment of the revised revenues were taken from the zamindars for a term of thirty years, subject to the sanction and confirmation of the Supreme Government. This term will end in different years in the various parganas, and under the recent redistribution in different parts of the same pargana. It will, however, have expired throughout the district in the year 1317 fasli or 1909-10 A.D.

Cost of the settlement.

161. I have given on page 95 a statement showing the amount annually expended in the course of the settlement operations from the 1st September, 1872, to the 31st March, 1880. The total cost inclusive of the expenditure on the cadastral survey has amounted to Rs. 7,06,951. Roughly speaking, I think, the cost of the three principal branches of the work may be taken to have been as follows :—

	Rs.
Survey	1,00,000
Assessment	3,00,000
Preparation of record of rights	3,00,000

The expenditure was greatest in the years 1877-78, and 1878-79, in which, as I have already shown, there was the greatest pressure of work.

Calculated on the area which has come under settlement the cost has been about Rs. 580 per 1,000 acres, of which Rs 80 was the cost of the survey and Rs. 500 that of the other operations. This expenditure will have been recovered by July, 1882, by which date the additional revenue that will have been received by Government owing to the revision of the demand will have amounted to Rs. 7,07,129 (vide page 92).

AGRA,
The 1st April, 1880.

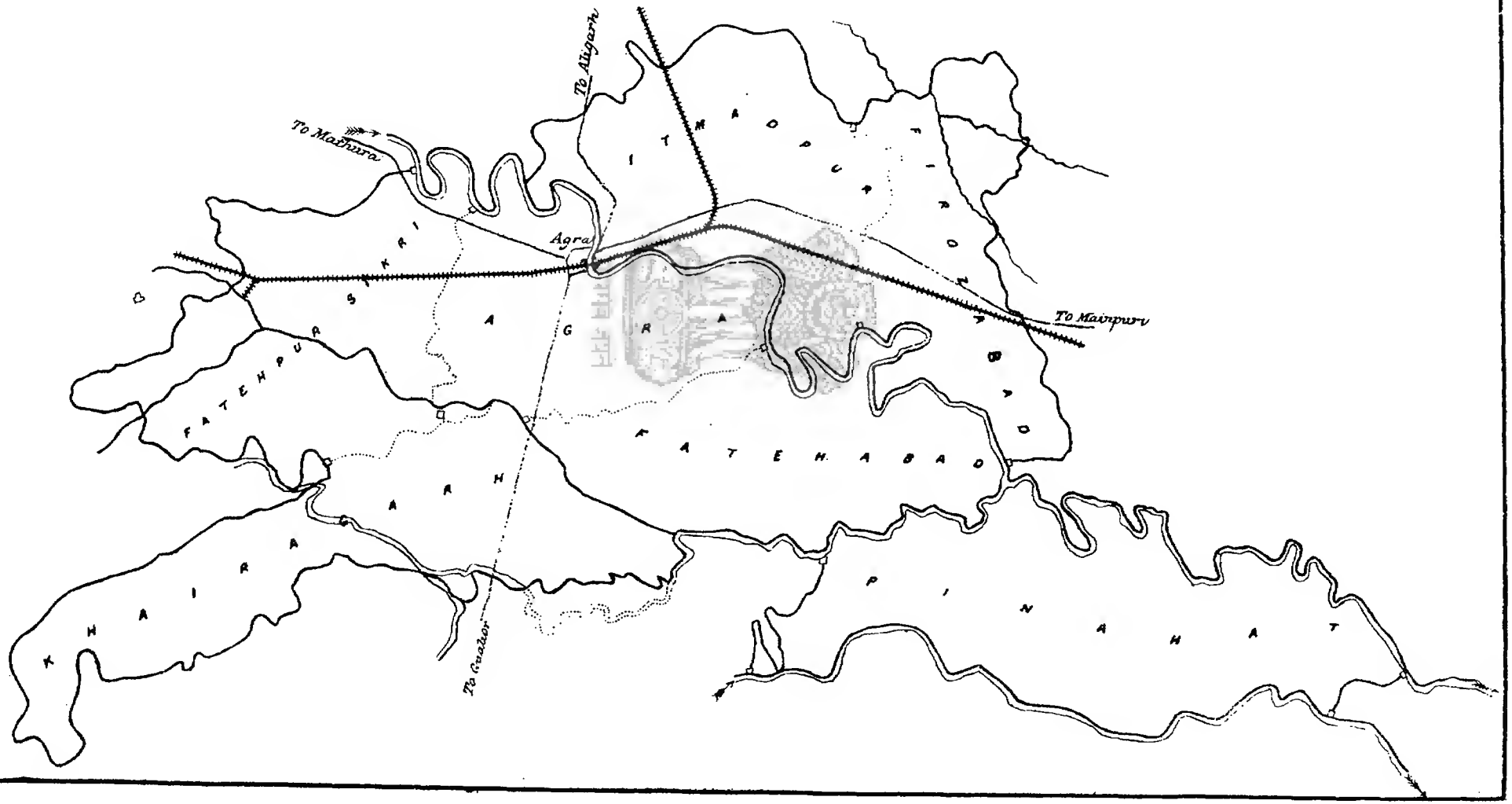
H. F. EVANS,
Settlement Officer

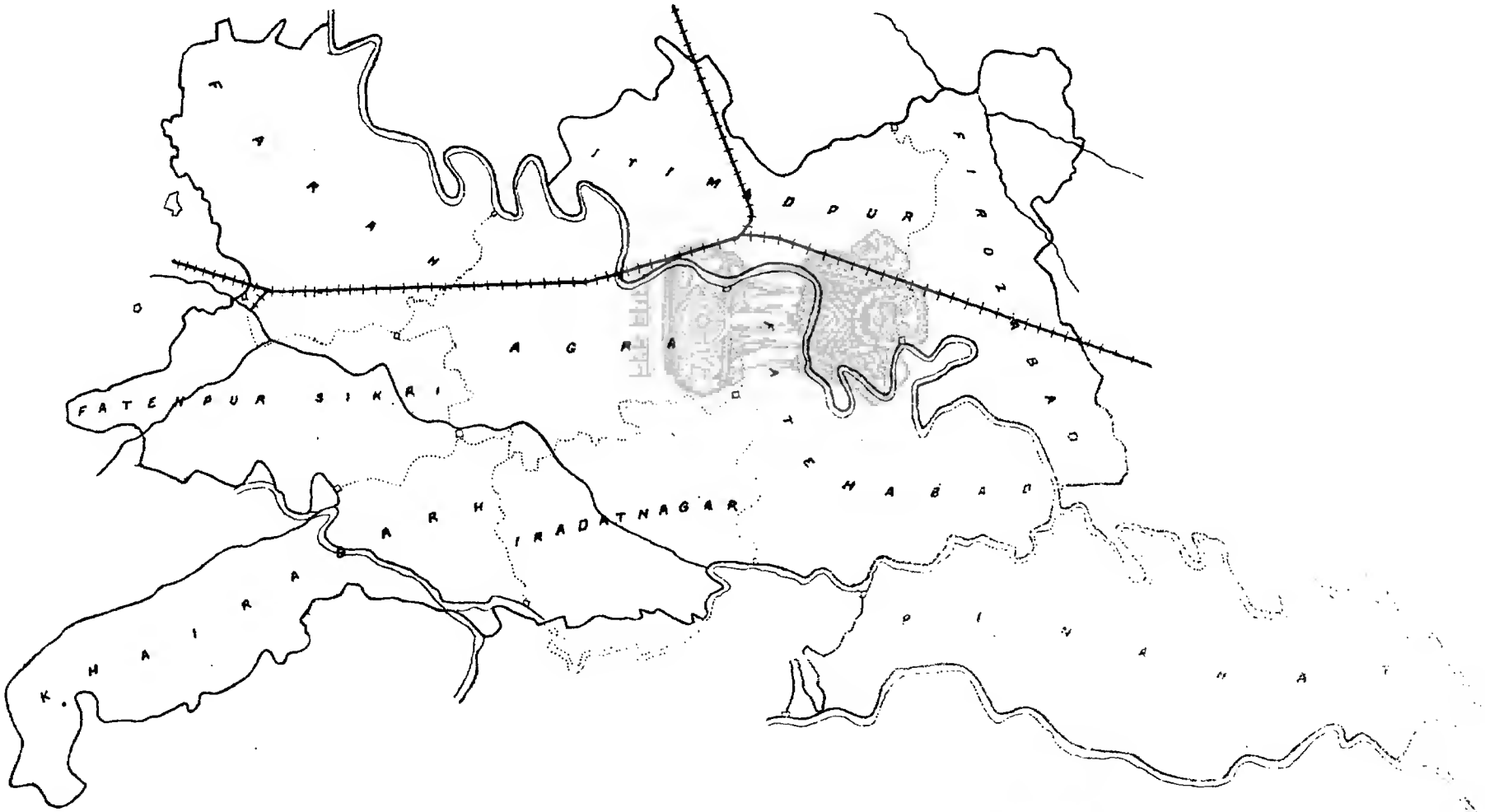
Statement showing the cost of the Agra Settlement.

Year.	Salary of gazetted officers.	Fixed establishment.	Variable establishment.	Mazkuri peons.	Job work.	Travelling allowance of officers.	Travelling allowance of establishment.	Contingencies.	Stationery.	Cost of instruments.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1872-73 (from 1st September, 1872, to 31st March, 1873.)	3,226 12 4	568 8 8	3,033 1 0	159 4 10	185 15 3	946 0 0	121 13 3	2,667 7 8	286 15 9	101 0 0	11,296 14 9
1873-74	25,850 0 0	4,990 0 0	8,454 12 3	1,220 14 4	2,304 10 1	2,017 9 0	596 3 2	2,994 3 4	1,015 3 9	46 0 0	49,489 7 11
1874-75	29,820 15 6	6,120 4 9	20,301 4 0	1,648 12 8	5,252 12 0	1,951 2 6	690 4 10	4,520 2 5	2,442 2 1	...	47 12 9
1875-76	32,400 0 0	8,327 15 4	28,526 13 6	2,606 7 9	9,882 10 8	2,308 12 0	829 3 0	3,850 1 10	1,881 0 0	...	90,613 0 4
1876-77	33,400 0 0	12,024 11 9	8,165 9 8	3,203 11 3	32,351 6 10	2,461 5 0	1,027 0 6	3,927 12 2	1,897 5 8	...	98,458 14 10
1877-78	34,843 9 2	12,992 9 10	...	3,796 10 3	51,637 4 3	2,894 5 6	1,147 8 0	4,761 9 5	4,251 13 11	...	1,16,325 6 4
1878-79	23,086 10 8	14,092 8 7	...	4,077 13 2	61,139 12 6	2,929 0 0	1,445 12 9	4,304 7 1	4,199 5 10	...	1,15,275 6 7
1879-80	20,250 0 0	12,269 0 0	...	...	19,070 0 0	960 0 0	370 0 0	1,404 0 0	1,225 0 0	...	55,548 0 0
Total ...	2,02,877 15 8	71,385 10 11	68,481 8 5	16,713 10 3	1,81,824 7 7	16,468 2 0	6,227 13 6	28,429 11 11	17,198, 15 3	147 0 0	6,09,754 15 6
Cadastral Survey Charges,	...	...	...	...	...	...	...	...	...	...	97,196 0 8
Grand Total ...	...	...	...	...	...	...	...	...	...	...	7,06,951 0 2

MAP OF THE AGRA DISTRICT

SHOWING THE PRESENT DISTRIBUTION OF THE PARGANAS.



MAP OF THE AGRA DISTRICT,

SHOWING THE FORMER DISTRIBUTION OF THE PARGANAS.